

1. Section summary



Bill No.	Description	Amount
	<u>SUMMARY</u>	
	<u>SECTION 1 - PRELIMINARIES AND GENERAL</u>	
SCHEDULE A	PRELIMINARIES AND GENERAL	
	<u>SECTION 2 - BUILDING WORKS</u>	
SCHEDULE B	DEMOLITIONS	
SCHEDULE C	EARTHWORKS	
SCHEDULE D	CONCRETE, FORMWORK AND REINFORCEMENT	
SCHEDULE E	PRECAST CONCRETE	
SCHEDULE F	MANSORY	
SCHEDULE G	WATERPROOFING	
SCHEDULE H	ROOF COVERING	
SCHEDULE I	CARPENTRY & JOINERY	
SCHEDULE J	CEILING, PARTITIONS AND ACCESS	
SCHEDULE K	FLOOR COVERINGS	
SCHEDULE L	IRONMONGERY	
SCHEDULE N	STRUCTURAL STEELWORK	
SCHEDULE O	METALWORK	
SCHEDULE P	PLASTERING	
SCHEDULE Q	TILING	
SCHEDULE S	GLAZING	
SCHEDULE T	PLUMBING AND DRAINAGE	
SCHEDULE U	PAINTWORK	
SCHEDULE V	ELECTRICAL	

1. Section summary

SCHEDULE W	CCTV	
SCHEDULE X	ACCESS CONTROL	
SCHEDULE Y	ICT	
SCHEDULE Z	MECHANICAL WORKS	
	<u>SECTION 3 - EXTERNAL WORKS</u>	
SCHEDULE A1	EXTERNAL WORKS	
	<u>SECTION 4 - PROVISIONAL SUMS</u>	
SCHEDULE B1	PROVISIONAL SUMS	
	SUB TOTAL 1	
	<p>CIDB CONTRACT SKILLS DEVELOPMENT GOALS (CSDG) (0.375% FACTOR X SUB TOTAL 1)</p> <p>Allow the Sum of 0.2% of Sub total 1 for the CIDB BUILD Fee:</p>	
	Total carried forward to form of offer	



Item No.	Payment clause	Description	Unit	Qty	Rate	Amount
	SANS 1200	Section 1 - Preliminaries and General				
		Fixed charge and value related items				
		<u>Contractual requirements:</u>				
1.1.1	A 8.3.1	Contractual requirements.	Sum	1.00		
		<u>Establishment of facilities for engineer:</u>				
1.1.2		(a) Furnished offices	Sum	1.00		
1.1.3		(b) Telephone.	Sum	1.00		
1.1.4		(c) Nameboards.	Sum	1.00		
		<u>Establishment of facilities for contractor:</u>				
1.1.5		(a) Offices and storage sheds.	Sum	1.00		
1.1.6		(b) Workshops.	Sum	1.00		
1.1.7		(c) Laboratories.	Sum	1.00		
1.1.8		(d) Living accommodation.	Sum	1.00		
1.1.9		(e) Ablution and latrine facilities.	Sum	1.00		
1.1.10		(f) Tools and equipment.	Sum	1.00		
1.1.11		(g) Water supplies, electric power and communications.	Sum	1.00		
1.1.12		(h) Dealing with water.	Sum	1.00		
1.1.13		(i) Access.	Sum	1.00		
1.1.14		(j) Plant.	Sum	1.00		
		<u>Other Fixed-charge Obligations:</u>				
1.1.15	A 8.3.3	Survey, setting out and preparation of as-built drawings.	Sum	1.00		
1.1.16		Soil testing equipment.	Sum	1.00		
1.1.17		Environmental management.	Sum	1.00		
1.1.18		Occupational Health and Safety.	Sum	1.00		
1.1.19	A 8.3.3	Items in terms of the Industrial Relations Act and Employment conditions for tender purposes.	Sum	1.00		
		<u>Removal of site establishment:</u>				
1.1.20	A.8.3.4	Removal of site establishment.	Sum	1.00		
		Total carried forward to section summary				

2. Preliminary & General

Item No.	Payment clause	Description	Unit	Qty	Rate	Amount
	SANS 1200	Section 1: Preliminaries and General				
		Time related items				
		<u>Contractual requirements:</u>				
1.1.21	A 8.4.1	Contractual requirements.	Months	12		
		<u>Establishment of facilities for engineer:</u>				
1.1.22	A 8.4.2.1	(a) Furnished offices.	Months	12		
1.1.23	A 8.4.2.1	(b) Telephone.	Months	12		
1.1.24	A 8.4.2.1	(c) Nameboards.	Months	12		
1.1.25	A 8.4.2.1	(d) Survey assistants and materials.	Months	12		
		<u>Establishment of Facilities for contractor:</u>				
1.1.26	A 8.4.2.2	(a) Offices and storage sheds.	Months	12		
1.1.27	A 8.4.2.2	(b) Workshops.	Months	12		
1.1.28	A 8.4.2.2	(c) Laboratories.	Months	12		
1.1.29	A 8.4.2.2	(d) Living accommodation.	Months	12		
1.1.30	A 8.4.2.2	(e) Ablution and latrine facilities.	Months	12		
1.1.31	A 8.4.2.2	(f) Tools and equipment.	Months	12		
1.1.32	A 8.4.2.2	(g) Water supplies, electric power and communications.	Months	12		
1.1.33	A 8.4.2.2	(h) Dealing with water.	Months	12		
1.1.34	A 8.4.2.2	(i) Access.	Months	12		
1.1.35	A 8.4.2.2	(j) Plant.	Months	12		
		<u>Supervision:</u>				
1.1.36	A 8.4.3	Supervision for the duration of Construction.	Months	12		
		<u>Company and Head office Overhead Cost:</u>				
1.1.37	A 8.4.4	Company and Head office Overhead Cost for the duration for the contract.	Months	12		
		<u>Other time related obligations:</u>				
1.1.38	A 8.4.5	Survey, setting out and preparation of as-built drawings.	Months	12		
1.1.39	A 8.4.5	Soil testing equipment.	Months	12		
1.1.40	A 8.4.5	Environmental management.	Months	12		
		Total carried forward to section summary				

2. Preliminary & General

Item No.	Payment clause	Description	Unit	Qty	Rate	Amount	
1.1.41	A 8.4.5	Occupational Health and Safety.	Months	12			
1.1.42	A 8.4.5	Items in terms of the industrial Relations Act and Employment conditions for tender purposes Temporary works <u>Temporary works:</u>	Months	12			
1.1.43	8.8.1	Main access roads to works.	Months	12			
1.1.44	8.8.1	Dealing with traffic SANS approved weld mesh type temporary barrier fencing 1,8m high covered with a 80% knitted HDPE monofilament green shed netting fixed to and including 100mm diameter gum poles set securely min 300mm deep in ground at max 3m spacing including excavation, backfilling, etc <u>Existing services</u> a) Supply or hire of specialist equipment for the detection of existing services. b) The use of equipment referred to in item (a) above. c) Excavation by hand in soft material to expose existing services d) Allow for temporary protection, as required in terms of the project specification of existing services e) 110 mm Sleeves incl. excavations, bedding material, G7 imported fill. Enterprise Development (CIDB B.U.I.L.D PROGRAM) <u>Indirect targeting for Enterprise Development through Construction garzatts notice No 35190 of 25 February 2013</u> (a) Enterprise Development of Targeted Enterprise or JV Partners. (a.1) Needs Analysis and Enterprise Development Plan per targeted Enterprise (a.2) Monitoring and Interim Reporting per Targeted Enterprise (a.3) Project Completion Report per Targeted Enterprise Total (a.1+a.2+a.3)	Months	12			
			m	150			
			item	1.00			
			item	1.00			
			m3	100.00			
			item	1.00			
			m	500.00			
			item	1.00			
			Per Qu	4.00			
			item	1.00			
			item	1.00			
			Prov.Sum	1.00			
		Total carried to summary					

2. Preliminary & General

Item No.	Payment clause	Description	Unit	Qty	Rate	Amount
		Page 1				
		page 2				
		page 3				
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p>Section 2 Building works</p> <p><u>BILL NO 1</u></p> <p><u>DEMOLITIONS,ETC</u></p> <p><u>TRADE PREAMBLES</u></p> <p><u>Trade Preambles:</u></p> <p>For Trade Preambles refer to 'Model Preambles for Trades' (2008 edition) for the full descriptions of material to be used and work to be done in this Bill.</p> <p><u>Taking Out and Removal of Asbestos</u></p> <p>Taking out and removing asbestos roof, gutters, underlay, fibreglass, downpipes, etc. must be in strict accordance with health and occupational safety regulations and a specialist firm must be contracted to dispose of the material</p> <p>The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent</p> <p>Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent</p> <p>Breaking up and removing and disposing to a designated area to be allocated by the project manager.</p>				
	1	Asphalt surfacing (30 - 100mm thick)	m2	700.00		
	2	Concrete surfacing	m2	600.00		
	3	1.8m high double skin wall	m	35.00		
	4	Single story building and foundation	m2	65.00		
		Total carried forward to section summary				

3. Demolition

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		Total carried to section summary				
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Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		BILL NO 2 EARTHWORKS				
		SITE CLEARANCE, ETC. Site clearance				
1		Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees n.e 200mm girth and cart away	m2	897		
		EXCAVATION, FILLING, ETC.				
		EXCAVATION, FILLING, ETC. OTHER THAN BULK				
		<u>Digging up topsoil</u>				
2		Digging up topsoil to an average depth of 150mm and stockpiling on site including carting away to dumpsite selected by contractor	m2	897		
		<u>Excavate in trenches n.e 2m deep</u>				
3		Trenches	m3	75		
4		Holes	m3	291		
5		Lift pits	m3	94		
		<u>Extra over trenches and holes excavations</u>				
6		Soft rock	m3	230		
7		Hard rock	m3	230		
		<u>Extra over all excavations for carting away</u>				
8		Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	460		
		<u>Risk of collapse of excavations</u>				
9		To sides of trenches and holes n.e 1.5m deep	m2	550		
		<u>Keeping excavations free from water</u>				
10		Keep excavations free from water	item	1		
		Total carried to summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>FILLING ETC</u>				
		<u>Earth filling supplied by the Contractor</u>				
		150mm layers of G7 compacted to 95% Mod AASTO under floors	m3	rate only		
		150mm layers of G5 compacted to 95% Mod AASTO under floors	m3	212		
		<u>Compaction of ground</u>				
		Compaction of natural or excavated ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	510		
		Compaction of natural or excavated ground surface to bottom of foundations etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m2	271		
		Ditto but in Pavings, etc.	m3	200		
		Backfilling to trenches, holes, etc.	m3	200		
		<u>Prescribed density tests on filling</u>				
		Modified AASHTO Density test.	no	52		
		Field Density test including Optimum Moisture Content (four readings per test).	no	50		
		<u>SOIL POISONING</u>				
		<u>Soil insecticide</u>				
		Under floors, etc. including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming.	m2	781		
		Under paving	m2	200		
		Total carried to summary				

4. Earthworks



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		Page 1				
		Page 2				
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		BILL NO 3				
		<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
		<u>UNREINFORCED CONCRETE</u>				
1		15MPa/19mm Concrete in blinding cast against excavated surfaces	m3	13		
2		Filling of cavity walls	m3	46		
		<u>30MPa/19mm Reinforced concrete</u>				
3		Bases	m3	101		
4		Strip footings	m3	14		
5		Surface bed	m3	87		
6		Columns in foundations (Provisional)	m3	4		
7		Columns	m3	14		
8		Beams	m3	30		
9		Lift shaft	m3	47		
10		Ramps	m3	8		
11		Staircase including landings	m3	15		
12		Slabs	m3	161		
13		Cantilever slabs	m3	4		
14		Plinth	m3	5		
		<u>Test cubes</u>				
15		Making and testing 150x150x150mm concrete strength test cubes	no	293		
		<u>Finishing top surfaces of concrete with power float</u>				
16		Surface beds, slabs etc.	m2	1,050		
		<u>Rough formwork</u>				
		<u>Rough formwork to sides</u>				
17		Bases (Provisional)	m2	109		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
18		Columns in foundations (Provisional)	m2	40		
19		Columns	m2	145		
20		Edges, risers, ends and reveals not exceeding 300mm wide	m2	100		
21		Slabs	m2	540		
22		Ramps	m2	10		
23		Lift shaft	m2	44		
24		Cantilever slabs	m2	14		
25		Staircase including landings	m2	7		
		Plinths	m2	7		
26		<u>Smooth formwork</u>				
27		Lift shaft internal	m2	55		
		<u>MOVEMENT JOINTS ETC</u>				
		<u>Expansion joints with 20mm softboard (bitumen impregnated softboard) (closed cell expanded polyethylene) between vertical concrete and brick surfaces</u>				
29		Not exceeding 300mm wide through columns	m	89		
		<u>REINFORCEMENT</u>				
30		<u>High tensile steel reinforcement to structural concrete work</u>				
31		Steel reinforcement in various diameter bars	t	32		
32		Ref 245 mesh	m2	2		
33		REF 395 mesh	m2	73		
34		REF 888 mesh	m2	26		
		Total carried to summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		BILL NO 4				
		PRECAST CONCRETE				
		PRECAST CONCRETE CLADDING ETC				
		Terra Rust Natural Stone Cladding 600 x 200mm, a blend of randomly shaped pieces of natural stone with a concrete backing in puzzle pieces, with no visible horizontal lines. The cement mesh base ensures that the rock pieces don't come off after the installation. Select corner pieces to form continuity around corners Cladding to be done by approved specialist experienced Applicator				
1		To walls	m2	150.00		
		Red Quartz Tiles: rectangular large format 10mm thick full bodied 'fire station' red high density polished quartz wall tiles fixed to cement plastered walls with manufacturer approved corrosion and weather resistant mechanical and chemical fixing systems. High strength, rapid set waterproof tile grey adhesive. Stainless steel mechanical fixings 2mm exterior waterproof grouting to match selected tiles. Medium complexity tiling pattern to be determined following selection of tiles Cladding to be done by approved specialist experienced Applicator				
2		To walls	m2	100.00		
		Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing				
3		Sills	m	79		
		PRECAST CONCRETE COPINGS ETC				
		Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing				
		350 x 150mm Thick overall copings weathered on top to 230mm thick along one edge, with drip groove in bottom along one edge	m	50.00		
		Total carried to summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p><u>BILL NO 5</u> <u>MASONRY</u> <u>BRICKWORK</u> <u>FOUNDATIONS (PROVISIONAL)</u></p> <p>Solid NFX (Non-Facing Extra) burnt clay bricks, minimum compressive strength ≥ 17.5 MPa (recommended 20–30 MPa), water absorption $\leq 10\%$ (preferred $\leq 7\%$), Durability Class F2 for MX3/MX4 marine and sulphate exposure. Bricks to comply with SANS 227. Mortar 1:5 using sulphate-resistant cement</p>				
1		115mm wall	m2	18.83		
2		230mm brick walls	m2	121.23		
3		280mm cavity walls	m2	131.52		
		<p><u>SUPERSTRUCTURE</u></p> <p>FBX (Face Brick Extra) burnt clay bricks, solid units, minimum compressive strength ≥ 17.5 MPa (recommended $\geq 25-35$ MPa), water absorption $\leq 10\%$ (preferred 4–7%), Durability Class F2. Bricks to comply with SANS 227. Use mortar: 1:4 for external and 1:5 for internal walls. Platinum Travertine FBX (for plinth, allow 2 course below ground and 2 courses above ground all</p>				
4		115mm wall	m2	46.13		
5		230mm brick walls	m2	329.30		
6		280mm Hollow walls of two half brick skins, including butterfly wall ties	m2	635.81		
7		Extra over beam filling (masonry above wall plate level)	m2	123.36		
		<p>Platinum Travertine FBX face bricks pointed with recessed horizontal and flush vertical joints</p> <p>Extra over brickwork for face brickwork.</p>	m2	36.92		
		<p><u>BRICKWORK SUNDRIES</u></p> <p><u>Brick reinforcement</u></p>				
		Total carried to summary				

7. Masonry

Page 1

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		Total carried to section summary				

8. Waterproofing

TRANSNET



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		Bill NO 6				
		WATERPROOFING				
		Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs				
		DAMPPROOFING OF WALLS AND FLOORS				
		One layer of 375 micron damp proof course				
1		In walls	m2	33.60		
2		In window sills	m2	111.38		
		One layer of 250 Micron Waterproof Sheeting Sealed At Laps With dampproof course (SANS 952-1985 type B)				
3		Under surface beds	m2	1,277.33		
4		Vertically between walls	m2	767.33		
		WATERPROOFING TO ROOFS ETC				
		One layer 4mm special polyester fully bonded waterproof membrane comprising a matrix modified with polypropylene dual reinforced with non-woven polyester cloth and glass fibre tissue, laid with 75mm side and 100mm end laps				
5		On flat roofs	m2	601.06		
6		On balcony floors	m2	22.10		
7		On shower floors	m2	5.63		
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p><u>Bill no 7</u></p> <p>Supplementary Preambles</p> <p>Fixing of flashing and eaves</p> <p>Fabricate to required profiles with hemmed edges. Fix using stainless steel fixings to steel roof structure. Install with minimum 150 mm laps and sealed joints. Provide separation membrane where in contact with dissimilar materials.</p> <p><u>ROOF COVERING, CLADDING</u></p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>Mono-pitched PVDF-coated Klintite aluminium roof sheeting fastened on steel purlins</u></p> <p>Profile roll formed in continuous lengths from 0.80mm thick 3004 hazy grey PVDF aluminium roof sheeting</p> <p><u>ROOF AND WALL INSULATION</u></p> <p>One layer of 75mm thick non-combustible lightweight industrial mineral wool insulation material (nominal density 12kg per m3), with reinforced kraft aluminium foil faced finished, taut over trusses and fixed concurrent with purlins with galvanised steel straining wires at 300mm centres, and tied down top and bottom after tensioning with galvanized hoop iron ties.</p> <p><u>Carpport covering</u></p> <p><u>Mono-pitched PVDF-coated Klintite aluminium roof sheeting fastened on steel purlins</u></p> <p>Profile roll formed in continuous lengths from 0.80mm thick 3004 hazy grey PVDF aluminium roof sheeting</p>				
1		Profile roll formed in continuous lengths from 0.80mm thick 3004 hazy grey PVDF aluminium roof sheeting	m2	708.55		
2		One layer of 75mm thick non-combustible lightweight industrial mineral wool insulation material (nominal density 12kg per m3), with reinforced kraft aluminium foil faced finished, taut over trusses and fixed concurrent with purlins with galvanised steel straining wires at 300mm centres, and tied down top and bottom after tensioning with galvanized hoop iron ties.	m2	591.26		
3		Profile roll formed in continuous lengths from 0.80mm thick 3004 hazy grey PVDF aluminium roof sheeting	m2	200.00		
		Total carried to summary				

	<p>SHEET METAL FLASHINGS, LININGS, COPINGS, ETC.</p> <p>PVDF-coated aluminium flashings, 0.8–1.0 mm thick, aluminium alloy 3004/3005/3105, coil-coated with 70% PVDF resin (Kynar 500 or equivalent), total DFT 25–30 microns. Flashings to match PVDF aluminium roof sheeting in colour and gloss.</p>				
4	Aluminum flashing and eaves closure	m	85		
	<p>ROOF AND WALL INSULATION</p> <p>Rigid Polyisocyanurate (PIR) insulation board, installed in between steel purlins and directly under aluminium roof sheeting. Boards to be foil faced both sides, minimum λ value 0.022–0.026 W/m·K, thickness 80mm fire rating Class B/B1/2 to SANS 428. Installation to ensure tight joints, sealed edges, mechanical fixing as per manufacturer's requirements, and full coordination with roofing contractor</p>				
5	Insulation laid taut and fastened to best suit marine environment	m2	708.55		
	Total carried to summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p><u>BILL NO 8</u> <u>CARPENTRY AND JOINERY</u></p> <p>The following joinery fittings have been measured as complete units, that is, the components of the units have not been separately measured. The descriptions, therefore, of such units shall be deemed to include all components, assembling, housing, notching, glueing, blocking, planting on and screwing with countersunk screws, edge strips, decorative plastic finish, glass, ironmongery, metalwork, paint or varnish finishes, etc.</p> <p>The references given in the descriptions are to the respective types of fittings detailed on the architect's drawings issued with these Bills of Quantities.</p> <p>The contractor will be responsible for the detailed design of doors and windows and necessary shop drawings to be developed</p> <p>Detail design of Doors and Windows and necessary shop drawings to be developed from the door and window schedules provided by the Employer</p>				
		<p>DOORS, ETC.</p> <p><u>Solid core flush panel</u></p> <p>40mm thick commercial veneered solid core flush panel door. Finish: Prepare Prime & Paint 1 undercoat and 2 coats mid-sheen enamel, as per Specifications (Dk & DR).</p>	No	7.00		
		<p>40mm thick commercial veneered semi-solid core flush panel door. Undercut: 120mm and reinstate door bottom edge. Finish: Prepare Prime & Paint 1 undercoat and 2 coats mid-sheen enamel, as per Specifications. (DL)</p>	No	9.00		
		<p>FITTINGS</p> <p>Kitchen cupboards, etc.</p>				
		Total carried to summary				

10. Carpenrty & Joinery

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
1		<p><u>Laundry cupboards</u></p> <p>Robust open shelving including best humidity and resistant carcass shelves, shelves and fascia type 2040x300x2720mm high with top, sides, bottom, division and shelf, including all necessary ironmongery</p>	no	1.00		
2		<p><u>Kitchen cupboards</u></p> <p>Robust open shelving including best humidity and resistant carcass shelves, shelves doors, hinges, handles, locks and name/number plates. Melamine facings to conceal canvass 3970x300x2720mm high with top, sides, bottom, division and shelf, including all necessary ironmongery</p>	no	1.00		
3		<p><u>Restroom cupboards</u></p> <p>Combination cupboard, including best humidity and corrosion resistant Carcass, Shelves, Doors, Hinges, Handles, Locks and Name/Number plates. Melamine facings to conceal carcass size 3382x600x2720mm high with top, sides, bottom, division, shelf, back and double hinged doors, including all necessary ironmongery</p>	no	1.00		
4		<p><u>Reception desk</u></p> <p>Floor L-section desk with one section 2400x920x950mm high and other section 1000x920x920 with sides, bottom, divisions, shelf, back and double hinged doors (sink elsewhere) including brush polished stainless steel kickplate (a/b), including all necessary ironmongery</p>	no	1.00		
5		<p><u>Changeroom bench</u></p> <p>Floor plugged hardwood timber bench 1400x380x400mm high formed of custom galvanized and painted mild steel frame below fixed to floor</p>	no	2.00		
		Total carried to summary				

10. Carpenrty & Joinery

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		page 1				
		page 2				
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p>BILL NO 9 CEILING, PARTITIONS AND ACCESS FLOORING</p> <p>SUPPLEMENTARY PREAMBLES</p> <p>Items described as "nailed" shall be deemed to be fixed with Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.</p> <p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted" the bolts have been given elsewhere.</p> <p>All ceiling systems must comply with SANS 10400, SANS 2001, and applicable fire & acoustic regulations</p> <p>All materials must be suitable for marine/coastal environments with high humidity, salt corrosion, and temperature variations</p> <p>Ceilings must allow for access to services (fire detection, electrical, HVAC, CCTV, etc.) where required</p> <p>Bulkheads</p> <p>Bulkheads are those areas of the ceiling which are at a level differing from the general ceiling in a particular room or area and which generally occur along the perimeter of the room or area. Their purpose is either to conceal services or to create and which generally occur along the perimeter of the room or an architectural feature by changing levels.</p> <p>Bulkheads will only be measured as such when they conform with the above description and when the horizontal or vertical dimensions do not exceed 1,2m. Should these dimensions be more than 1,2m then the horizontal or vertical ceilings will be included in the general ceiling measurements.</p> <p>Partitions</p>				

11. Ceiling

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		Installations to comply with SANS 10400 (all parts as applicable), SANS 2001 series (workmanship), SANS 10177 (fire testing where ratings are claimed), and SANS 204 (energy efficiency—insulation). Use manufacturer’s tested and certified systems for stated fire/acoustic performance				
		All metal components to be corrosion-protected for marine/coastal conditions; minimum Z275 galvanized or marine-grade aluminium/stainless steel where exposed or at openings				
		NAILED UP CEILINGS				
1		9.5mm layer of Plasterboard ceilings as per drawing	m2	40.00		
2		Opening for sprinkler head	no	18		
3		Extra over celing for opening for grille/ air conditioning diffuser	no	1.00		
		SUSPENDED CEILINGS				
		600x600x15mm pre-painted acoustic panels on exposed suspension grid system including hangers, necessary hold-down clips and wedges, etc				
4		Ceilings suspended not exceeding 1m below concrete soffits	m2	350.00		
5		Opening for sprinkler head	no	156		
6		Extra over celing for opening for grille/ air conditioning diffuser	no	1.00		
		600x600x15mm pre-painted humidity resistant panels on exposed suspension grid system including hangers, necessary hold-down clips and wedges, etc				
7		Ceilings suspended not exceeding 1m below concrete soffits	m2	97.00		
8		Opening for sprinkler head	no	43		
9		Extra over celing for opening for grille/ air conditioning diffuser	no	2.00		
		Total carried to summary				

11. Ceiling

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		PARTITIONS, ETC.				
		<p>Drywall partitioning shall comprise steel studding top and bottom tracks with vertical studs, friction fitted or pop-riveted to the top and bottom tracks with similar additional vertical studs as necessary at abutments, ends, etc. and covered as described with wall board screwed to studding with "Drywall" screws at maximum 220mm centres. Boards are to be butt jointed and finished with plasterboard tape and jointing compound all in accordance with the manufacturer's instructions. Intersections and abutments are measured separately and descriptions shall be deemed to include any additional studs, corner beads, jointing compound, tape, etc.</p>				
10		Partitioning with bottom track plugged and top track fixed to suspended ceiling tees.	m	173		
11		Extra over partition 2,81m high for corner	no	4.00		
12		Extra over partition 2,81m high for T-intersection	no	5.00		
13		Extra over partition 2,81m high for fair end	no	3.00		
		Total to carried to summary				

11. Ceiling

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		page 1				
		page 2				
		page 3				
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p>BILL NO 10</p> <p>FLOOR COVERINGS, WALL LININGS, ETC.</p> <p>Supplementary preambles</p> <p>Install to SANS 10400 and manufacturer requirements. Materials must suit marine/coastal conditions (humidity, salt, temperature fluctuations).</p> <p>Prepare substrates: cleaning, levelling, priming, moisture control, and smoothing as required</p> <p>Include all adhesives, trims, skirtings, transitions, movement joints, and protection of finished work</p> <p>FLOOR COVERINGS</p> <p>FLOOR: 50 × 50 cm modular carpet tiles manufactured from solution-dyed nylon fibres (including eco-blend or recycled nylon content), on suitable backing, laid in a tessellated pattern using an approved adhesive system, all in accordance with manufacturer's preparation and installation requirements. Colour to be selected'</p>				
1		On floors	m2	167.93		
2		60mm high matching skirting	m	15.20		
3		<p>FLOOR: Rubberized Surface 4mm Heavy Commercial use. Colour to be selected.</p> <p>on floors</p>	m2	56.59		
4		100mm matching skirting	m	121.91		
5		<p>FLOOR: 3mm Heavy Commercial luxury vinyl tile; Colour to be selected</p> <p>On floors</p>	m2	110.49		
6		100mm high pvc matching skirting	m	120.78		
7		<p>FLOOR: Static dissipative vinyl flooring - Steel Grey</p> <p>on Floors</p>	m2	4.08		
8		100mm pvc matching skirting	m	6.18		
		Total carried to summary				

12. Floor coverings

		EPOXY COATING & DEMARCATION				
9		FLOOR: Prime and Apply 3 coats two component polyurethane enamel applied in accordance with paint Manufacturers recommendations/specifications by an approved Applicator Colours Red, Yellow and Grey to be selected on floors	m2	142.67		
10		100mm high pvc matching skirting	m	24.57		
		GRANOLITHIC SCREED				
11		on floors	m2	37.38		
		SKIRTINGS, NOSINGS, ETC.				
		PVC skirtings, nosings, etc				
12		60mm high	m	108.98		
13		100mm high	m	133.00		
		Total carried to summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		BILL NO 11				
		IRONMONGERY				
		HINGES, BOLTS, ETC				
1		102x75x3mm Aluminium hinge with stainless steel washers	No	150.00		
		CATCHES, CABIN HOOKS, ETC				
3		Dust proof strike, 38x19x13mm, Stainless Steel	No	9.00		
4		Stainless steel Adjustable Roller Bolt, Rollerbolt & Deadbolt Lock, Heavy Duty, Euro Cylinder, Excluding Cylinder, 55mm (Backset), 60mm (ctc)	No	2.00		
5		Stainless steel wall buffer / door wall protector	No	8.00		
6		Stainless steel floor mounted door stop	No	29.00		
7		Stainless steel Hat and coat hook with rubber buffer	No	9.00		
8		Stainless steel Cabin hook 150mm	No	3.00		
		LOCKS				
9		Stainless steel narrow stile sash lock operating with european profile cylinder.	No	19.00		
10		Helping hand indicator bolt for paraplegic wc	No	1.00		
11		Stainless steel bathroom deadlock	No	15.00		
12		Stainless steel Cylinder sash lock	No	2.00		
13		Satin Nickel 63mm double cylinder - Master Key / 63mm, Double, Cylinder, Keyed Different, 5 Pin?	No	23.00		
14		Satin Nickel 43mm half knob cylinder	No	1.00		
15		MK Satin Nickel 40.5mm single cylinder - Master keyed	No	6.00		
16		Stainless steel Round cylinder escutcheon	No	1.00		
17		Stainless steel narrow stile cylinder escutcheon	No	8.50		
		Total carried to summary				

13. Ironmongery

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
18		Two point locking panic bar -door leaf 1000mm wide x 2270mm high	No	2.00		
2		Privacy lockset for WC door, complete with turn-and-release mechanism and emergency release/ Bathroom, Indicator with Bolt, Stainless Steel?	No	8.00		
		<u>HANDLES</u>				
19		Stainless steel 120x40mm oval flush pull handle	No	4.00		
20		Pull handle bt fixed on a 170x170x1.2mm thick grade 430 stainless steel plate with no cylinder cutout.	No	4.00		
21		Pull handle bt fixed on a 170x170x1.2mm thick grade 430 stainless steel plate with cylinder cutout.	No	5.00		
22		Stainless steel 382x32mm D shaped offset tubular pull handle btb fixing sets included	No	6.00		
23		Stainless steel 382x25mm straight tubular pull handle btb fixing sets included)	No	1.00		
24		Stainless steel 149x19mm straight tubular pull handle BTB (BTB fixing sets included)	No	8.00		
25		Stainless steel 149x19mm stainless steel tubular pull handle BT	No	2.00		
		<u>TH120 BP Cyl Stainless Steel</u>				
26		Stainless steel lever handle on 170x170 plate with cylinder cut out	No	2.00		
27		Stainelss steel lever handle on narrow stile rose with narrow stile cylinder escutcheons	No	9.00		
		<u>PHT3901 Satin Nickel</u>				
28		Exterior locking panic bar (one two or three point locking, 1000 or 1300mm wide)	No	2.00		
		<u>PUSH PLATES AND KICK PLATES</u>				
29		170x170x1.2mm thick grade 430 stainless steel plate	No	5.00		
30		170x170x1.2mm thick grade 430 stainless steel plate with cylinder cutout left	No	2.00		
		Total carried to summary				

13. Ironmongery

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
31		M4 Patent Male/Female fixing screws (Pack)	No	18.00		
32		200x 800x 1.2mm thick grade 430 stainless steel kick plate	No	20.00		
		<u>DOOR CLOSERS</u>				
33		Silver finish 232L x 78W x 45D overhead regular arm Non hold open door closer fitted on doors up to 1100mm wide.	No	4.00		
34		Silver finish 232L x 60W x 40D overhead regular arm Non hold open door closer-adjustable strength hydraulic speed	No	2.00		
35		EN 3/4 Regular Arm delayed action open door selector set	No	1.00		
36		EN 2-4 Parallel Arm non hold open door selector set	No	3.00		
37		EN 3-6 Regular Arm non hold open door selector set	No	2.00		
38		EN 3-6 Parallel Arm non hold open door selector set	No	3.00		
39		Patent fixing screws for door closer	No	20.00		
		<u>SLIDING GEAR</u>				
40		Aluminium sliding door gear set with track 2445mm fixed to drywall including brackets, hanger, rollers, guides, stops etc	No	2.00		
		<u>LETTERS, NAMEPLATES, ETC</u>				
41		Stainless steel 150x150x1.2mm male toilet sign.	No	2.00		
42		Stainless steel 150x150x1.2mm female toilet sign (Stainless Steel?)	No	2.00		
43		Stainless steel 150x150x1.2mm disabled /physically challenged/wheelchair sign	No	1.00		
44		Stainless steel 150x150x1.2mm tea cup sign	No	1.00		
45		Stainless steel 150x150x1.2mm electrical warning sign	No	2.00		
46		Stainless steel 150x150x1.2mm cleaner sign	No	2.00		
		Total carried to summary				

13. Ironmongery

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>BATHROOM FITTINGS.</u>				
		<u>Towel Dispenser:</u>				
47		Aluminium wall-mounted paper towel holder frame, with non-corrosive components, size 230 x 420 x 420mm (to be confirmed prior order)	No	3.00		
48		Stainless steel (coastal grade) wall-mounted paper towel dispensing unit, with automatic dispenser (to be confirmed prior order)	No	6.00		
49		Stainless steel lockable 3 toilet roll holder, with cylinder lock, size 385 x 126 136mm, plugged to wall with stainless steel screws (to be confirmed prior order)	No	8.00		
50		Stainless steel soap dispenser, 1.25 liter, size 140 x 235 x 140mm, plugged to wall with stainless steel screws (to be confirmed prior order)	No	5.00		
51		Stainless Steel 10l SHE Bin	No	5.00		
52		Stainless steel wall-mounted waste bin, with inner binliner securing system, plugged to wall (to be confirmed prior order)	No	5.00		
53		Stainless steel air freshner spray dispenser (400ml) wall-mounted seat sanitiser spray	No	9.00		
54		Heavy duty industrial quality concealed plastic bin, with non-corrosive mechanism	No	2.00		
		<u>SUNDRIES.</u>				
55		Stainless steel 2 tier, wall corner shelf, size 235 x 265 x 160mm, plugged.	No	6.00		
56		Stainless steel automatic hand dryer (1400w), Vandal-Proof, Automatic power cut-off	No	4.00		
57		Stainless steel heavy duty towel hooks	No	6.00		
58		Stainless steel jacket hook (8 hooks), size 20 x 120 x 29000 mm sealed hardwood fixed to wall	No	8.00		
59		Stainless steel towel rack and hooks, 500mm long	No	4.00		
		<u>White nylon toilet brush:</u>				
60		Toilet brush	No	3.00		
		Total carried to summary				

13. Ironmongery

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		page 1				
		page 2				
		page 3				
		page 4				
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>BILL NO 12</u>				
		<u>STRUCTURAL STEELWORK</u>				
		<u>STEEL TRUSSES, ETC</u>				
		<u>Steel rafter</u>				
1		203 x 133x 30kg/m I section rafters	t	3.07		
2		254 x 146 x 311 rafter	t	1.00		
		<u>Bottom chord</u>				
3		100x100x8 equa leg angles	t	1.25		
		<u>Posts</u>				
4		70x70x8 equal leg angles posts	t	1.00		
		<u>Struts</u>				
5		70x70x6 Equal leg angle struts	t	1.00		
6		89 x 3 CHS eaves struts	t	1.00		
		<u>Sag angles</u>				
7		60x60x6 Equal leg angles sag angles	t	1.00		
8		40 x 40 x 4L sag rods	t	1.00		
		<u>Tie back</u>				
9		60x60x6 equal leg angle tie back	t	1.00		
		<u>Roof cross bracing</u>				
10		101.6x3 circular hallow section roof cross bracing	t	1.30		
11		60 x 60x 6 L rafter bracing	t	1.00		
		<u>Purlins</u>				
12		250x75x3.5 C channel	t	4.29		
13		175 x 75 x 20 x 3.5 purlin at 1250 c/c	t	1.00		
		<u>Plates</u>				
16		450 x 280 x 20 THK base plate	t	1.00		
17		8 mm THK END PLATE WITH 13mm Ø	t	1.00		
18		85 x85 x12mm THK anchor plate	t	1.00		
		<u>Bolts</u>				
		Total carried to summary				

14. Structural steelwork

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
19		26mm Ø hole for M24 holding down bolts <u>Column/stachion</u>	t	1.00		
20		254 x 146 x 31 I stachion welded to base <u>Haunch cut</u>	t	1.00		
21		254 x 146 x 31 I <u>STEEL FLOORS, STAIRS, ETC.</u>	t	1.00		
22		152 x 152x 4.5 THK poles	t	1.00		
23		150x150x23 H section	t	1.00		
24		60x60x6 L section	t	1.00		
25		180x70 PFC forming stringer	t	1.00		
26		180 x 70 PFC forming landing	t	1.00		
27		40x40x4mm L	t	1.00		
28		m12 bolt with washers				
29		4mm thick gusset plate to welded to S.H.S and bolted 40x40x4mm THK.	t	1.00		
30		76x4mm THK.C.H.S	t	1.00		
31		100X100X4mm	m3	2.30		
32		100 x 50 PFC forming landing	t	1		
33		Landing finished vitagrid	m2	100		
34		6mm cap plate to be welded to 100x 100x4mm S.H.S and bolted 180x70PFC	t	1.0		
35		5mm THK stiffener welded to inside of 180x70mm pfc <u>KITCHN AND BACK ENTRANCE</u>	t	1.00		
36		210x150x10mm baseplate with 2x M16 bolts grade 8.8	t	1.00		
37		160 IPE stanchion welded to base plate	t	1.00		
38		270x100x10mm end plate	t	1.00		
39		60x 60x10mm THK anchor plate	t	1.00		
40		PFC 180x70	t	1.00		
41		150x7520x2.5mm CFLC purlin	t	1.00		
42		40x40 x 4L sag rod	t	1.00		
43		IPE 160 rafter <u>Vastrap floor</u>	t	1.00		
44		In duct floors	m2	1.54		
		Total carried to summary				

14. Structural steelwork

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		page 1				
		page 2				
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p>BILL NO 13 METALWORK</p> <p>Supplementary Preambles</p> <p>Provide all metalwork complete, including design (where required), fabrication, finishing, transport, installation, fixings, anchors, welds, and protection</p> <p>Mild steel: hot-dip galvanized to SANS requirements; paint-grade where scheduled. Stainless steel: Grade 304 internal, 316 external or in high-exposure areas. Aluminium: Marine-grade alloy for exposed exterior elements</p> <p>Fabricate to approved shop drawings with accurate joints, welds, and tolerances. All welds continuous, ground smooth where exposed.</p> <p>Handrails, balustrades, brackets, frames, grilles, guards, gates, and supports to be manufactured by an approved specialist where noted.</p> <p>Design</p> <p>Detail design of Metalwork and necessary shop drawings of items like balustrades and gates to be developed from the concepts illustrated in the Employer's Design Layouts</p> <p>GALVANISED STEEL HANDRAILS, BALUSTRADES, ETC</p> <p>Welded balustrading to walkways</p> <p>1 1000mm high Horizontal balustrading</p> <p>2 Raking balustrading to staircase no.</p> <p>3 Extra over for junction of end of horizontal with end of raking balustrades</p> <p>ALUMINIUM WINDOWS, DOORS, ETC</p> <p>Custom Aluminum Window, installed in prepared opening and, secured to plastered brickwork and or concrete structure, with non-corrosive mechanical fixings as specified by Window Specialist's.</p>				
			sum	1		
			m	11		
			m	40		
			no	2		
		Total carried to summary				

15. Metalwork

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
4		Window Frame composed of suitable premium quality Powder Coated sections including integrated gaskets & seals				
5		Window size 1500x1200mm high as per specification	no	2		
6		Window size 600x600mm high as per specification	no	8		
7		Window size 800x1200mm high as per specification	no	1		
8		Window size 3000x1200mm high as per specification	no	1		
9		Window size 3600x560mm high as per specification	no	1		
10		Window size 2230x2400mm high as per specification	no	2		
11		Window size 5550x2605mm high as per specification	no	1		
12		Window size 3920x2605mm high as per specification	no	1		
13		Window size 1500x2400mm high as per specification	no	2		
14		Window size 2800x550mm high as per specification	no	1		
15		Window size 2500x4475mm high as per specification	no	1		
16		Window size 3000x2400mm high as per specification	no	2		
17		Window size 1700x2400mm high as per specification	no	2		
		Window size 5550x1275mm high as per specification	no	2		
18		Window size 3600x21635mm high as per specification	no	1		
		Window size 3600x2635mm high as per specification	no	1		
19		Window size 7135x2635mm high as per specification	no	1		
20		Window size 5325x2635mm high as per specification	no	1		

15. Metalwork

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		Total carried to summary				
21		Window size 2800x600mm high as per specification	no	1		
		ALUMINIUM LOUVRE UNITS				
		POWDER COATED HORIZONTAL				
		Custom Fixed Aluminum Louvre, installed in prepared opening and, secured to plastered brickwork and or concrete structure, with non-corrosive mechanical fixings as specified by Window Specialist's Engineer. Louvre composed of suitable premium quality Powder Coated sections including integrated gaskets & seals. Colour to be selected by Architect				
22		Aluminum Louvre unit for 800x2400mm high opening	no	1		
		ALUMINIUM CANOPY				
		Design, supply, deliver and Install Glass paneling Kitchen entrance cover canopy size 2000 x 3260mm. Workshop drawings for canopy structure to be prepared by contractor for review and acceptance by the architect/engineer to fabricated.	no	1		
		Design, supply, deliver and Install Glass paneling Main entrance cover canopy size 2975 x 5990mm. Workshop drawings for canopy structure to be prepared by contractor for review and acceptance by the architect/engineer to fabricated.	no	1		
		Design, supply, deliver and Install Glass paneling Back entrance cover canopy size 2000 x 8000mm. Workshop drawings for canopy structure to be prepared by contractor for review and acceptance by the architect/engineer to fabricated.	no	1		
		Aluminium Glass partition				
		Shopfront 2720mm high with single door size 950 x 2090mm high overall, shopfront glazed with Clear laminated safety glass, including self-adhesive, sandblast vinyl (plain) at 2100mm high etc., installed complete.	m	18		
		Total carried to summary				

15. Metalwork

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		PRESSED STEEL DOOR FRAMES				
		Custom 2.0 mm thick Class C homogeneous vinyl-clad galvanized steel frames, prepared for bolt-on installation (230 mm wall thickness excluding plaster), finished with one coat primer and two coats mid-sheen enamel paint, complete with all required ironmongery, sealing and finishing, in accordance with the project specification.				
23		Steel door , 900x2032mm high	no	4		
		Custom 2.0 mm thick Class D homogeneous vinyl-clad galvanized steel frames, prepared for bolt-on installation (230 mm wall thickness excluding plaster), finished with one coat primer and two coats mid-sheen enamel paint, complete with all required ironmongery, sealing and finishing, in accordance with the project specification				
24		Steel door , 900x2032mm high	no	2		
		Custom 2.0mm brushed polished pressed stainless steel frame (230mm wall thickness excluding plaster)				
25		Steel door, 900x2032mm high	no	2		
		Custom 2.0mm pressed rebated galvanized steel frame (230mm wall thickness excluding plaster) finished with Prime & Paint 1 undercoat and 2 coats mid-sheen enamel, as per Specifications				
26		Steel door , 900x2032mm high	no	1		
27		Steel door, 813x2032mm high	no	1		
		Custom 2.0mm pressed rebated galvanized steel frame (115mm wall thickness excluding plaster) finished with Prime & Paint 1 undercoat and 2 coats mid-sheen enamel, as per Specifications				
28		Steel door, 762x2032mm high	no	8		
		Custom 1.6 mm thick Class B homogeneous vinyl-clad galvanized steel frames, prepared for bolt-on installation (230 mm wall thickness excluding plaster), finished with one coat primer and two coats mid-sheen enamel paint, in accordance with the project specifications				
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
29		Steel door, 762x2032mm high	no	1		
30		Steel door, 900x2032mm high	no	2		
		Aluminum doors				
		Custom Fixed Aluminum Louvre Door & Top Light, installed in prepared opening and, secured to plastered brickwork and or concrete structure, with non-corrosive mechanical fixings as specified by Window Specialist's Engineer. Powder Coated 'Crealco Clip 44 with Fixed Louvres' or similar approved sections including integrated gaskets & seals.				
31		Aluminum door, 800x 2680mm high	no	1		
		Custom Aluminum Double Door Frame with Fanlights , installed in prepared opening and, secured to plastered brickwork and or concrete structure, with non-corrosive mechanical fixings as specified by Door Specialist's Engineer. Door Frame composed of suitable premium quality Powder Coated sections including integrated gaskets				
32		Aluminum door, 1700mm x 2605mm high	no	1		
		Custom Aluminum Double Door Frame with Fanlights , installed in prepared opening and, secured to plastered brickwork and or concrete structure, with non-corrosive mechanical fixings as specified by Door Specialist's Engineer. Door Frame composed of suitable premium quality Powder Coated sections including integrated gaskets & seals				
33		Aluminum door, 1700 x 2720mm high	no	1		
		Custom Aluminum Double Door Frame with Fanlights and Sidelights, installed in prepared opening and, secured to plastered brickwork and or concrete structure, with non-corrosive mechanical fixings as specified by Door Specialist's Engineer. Door Frame composed of suitable premium quality Powder Coated sections including integrated gaskets				
34		Aluminum door, 3600 x 2605	no	1		
		Total carried to summary				

15. Metalwork

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
35		Custom Aluminum Double Door Frame with Fanlights , installed in prepared opening and, secured to plastered brickwork and or concrete structure, with non-corrosive mechanical fixings as specified by Door Specialist's Engineer. Door Frame composed of suitable premium quality Powder Coated sections including integrated gaskets & seals Aluminum door, 800 x 2605mm high	no	1		
36		Custom Aluminum Sliding Door Frame with Fanlights and Sidelights, installed in prepared opening and, secured to plastered brickwork and or concrete structure, with non-corrosive mechanical fixings as specified by Door Specialist's Engineer. Door Frame composed of suitable premium quality Powder Coated 'Creance Clip 44' or similar approved sections including integrated gaskets Aluminum door, 5548 x 2650mm high	no	1		
37		Custom Aluminum Double Door Frame with Top lights , installed in dry wall partitioning with suitable drywall glazing rails, by Drywall Specialist. Door Frame composed of suitable premium quality approved powder coated aluminum sections including gaskets & seals. Aluminum door, 1575 x 2690mm high	no	5		
38		Custom Door Frame with Top lights , installed in dry wall partitioning with suitable drywall glazing rails, by drywall Specialist. Door Frame composed of suitable premium quality approved powder coated aluminum sections including gaskets & seals. Aluminum door, 960 x 2690	no	3		
39		Custom Aluminum Door Frame with Top lights , installed in dry wall partitioning with suitable drywall glazing rails, by Drywall Specialist. Door Frame composed of suitable premium quality approved powder coated aluminum sections including gaskets & seals. Aluminum door, 2445 x 2690	no	1		
40		Custom Aluminum Double Door Frame with Fanlights , installed in prepared opening and, secured to plastered brickwork and or concrete structure, with non-corrosive mechanical fixings as specified by Door Specialist's Engineer. Door Frame composed of suitable premium quality Powder Coated sections including integrated gaskets & seals Aluminum door, 1700 x 2635	no	1		
		Total carried to summary				

15. Metalwork

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		Page 1				
		Page 2				
		Page 3				
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		Page 6				
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p><u>BILL NO 14</u> <u>PLASTERING</u></p> <p>Supplementary preambles</p> <p>Screed</p> <p>Standard cement: sand screed 1:3 , clean sharp sand, potable water. Minimum thickness 25–40 mm unless otherwise specified. Include bonding slurry where screed is laid monolithically onto concrete</p> <p>Internal plastered</p> <p>Cement:sand plaster 1:5 mix (or as specified), using clean well-graded plaster sand. Additives permitted only where specified. Allow for additional Gypsum Plaster coat to internal plastered walls for painting</p> <p>External plaster</p> <p>Cement:sand mix 1:4 minimum, using washed plaster sand. Include approved waterproofing or polymer additive where specified for enhanced durability.</p> <p><u>Granolithic Screed</u></p> <p><u>1:3 Cement screed steel trowelled on concrete</u></p>				
1		30mm Thick on floors.	m2	335.22		
		<u>INTERNAL PLASTER</u>				
2		On walls	m2	329.30		
3		On narrow width	m2	15.00		
4		On sloping top, front edge and projecting soffit of sills	m	79.00		
		<u>EXTERNAL PLASTER</u>				
5		On walls	m2	635.81		
		<u>Plasterboard Ceilings</u>				
6		12mm thick plastered	m2	127.00		
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p><u>BILL NO. 15</u> <u>PLUMBING AND DRAINAGE</u></p> <p><u>TRADE PREAMBLES</u> <u>Trade Preambles:</u> For Trade Preambles refer to 'Model Preambles for Trades' (2008 edition) for the full descriptions of material to be used and work to be done in this Bill.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>uPVC pipes and fittings.</u> Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings. Soil, waste and vent pipes and fittings shall be solvent weld jointed.</p> <p><u>uPVC pressure pipes and fittings:</u> Pipes for water supply shall be of the class stated. Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.</p> <p><u>Concrete pipes:</u> Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.</p> <p><u>Rainwater Good</u> Provide a complete seamless aluminium rainwater management system, including gutters, downpipes, brackets, outlets, bends, shoes, stop ends, fixings, sealants, and all accessories for a fully operational installation</p> <p>System to be designed, manufactured, and installed by an approved Specialist, using certified equipment for continuous on site roll forming</p>				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p>Seamless aluminium gutters roll formed on site from pre painted aluminium coil, minimum thickness 0.6–0.8 mm (or as specified)</p> <p>Aluminium alloy suitable for marine/coastal exposure</p> <p>Factory pre finished with polyester, PVDF, or equivalent high durability coating in approved colour</p> <p><u>Copper pipes:</u></p> <p>Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (halfhard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be Premium-quality chrome-plated brass tapware/fittings. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.</p> <p><u>Fixing of pipes</u></p> <p>Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level.</p> <p><u>Lead pipes and traps</u></p> <p>All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.</p> <p><u>Reducing fittings:</u></p> <p>Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained</p>				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p><u>Exposed concrete surfaces:</u></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.</p> <p><u>Excavations:</u></p> <p>No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling. 'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p> <p><u>Laying, backfilling, bedding, etc of pipes:</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions. Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB</p> <p><u>Waste unions:</u></p> <p>Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.</p> <p><u>Petrolatum anti-corrosion wrapping tape for pipelines, bolts and steel components, including primer and conformable wrap, applied to manufacturer's requirements for long-term corrosion protection</u></p> <p>Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied with minimum 15mm lap per spiral unless otherwise described. Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including all mastic, tape, 'Layflat' sheeting, securing of same, etc. Prices for wrapping of pipes shall include for all work as described to couplings in the length.</p>				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>RAINWATER DISPOSAL</u>				
		<u>Aluminum:</u>				
1		Seamless 125 x 95 x 115mm aluminium gutter with baked enamel finish fixed with concealed brackets, all to suppliers specification.	m	40.60		
2		100x75mm Rainwater pipes	m	14.75		
3		Extra over gutter for stopped end	0	2.00		
4		Extra over gutter for outlet for 100x75mm pipe	No	2.00		
5		Extra over rainwater pipe for bend	No	2.00		
6		Extra over rainwater pipe for shoe	No	2.00		
		<u>Precast concrete splash-plate</u>				
7		600mm rainwater channel	No	4.00		
		<u>PRECAST CONCRETE CHANNELS</u>				
8		Precast concrete combined kerb and drainage channel unit, complete with inlet openings, manufactured to SANS requirements	m	71.97		
		<u>STORMWATER DRAINAGE</u>				
9		Excavation in earth not exceeding 1m deep for Blocks & Max Tech trenches	m3	12.25		
10		Unreinforced concrete bedding under precast concrete blocks	m3	3.06		
		<u>Construct complete sumps, catchpits, inspection chambers, etc including concrete kerbs or precast concrete cover slabs (gratings and covers elsewhere)</u>				
11		1200 x 1200mm Brick catchpit 3000mm deep internally	No	2.00		
		<u>Cast iron gratings, covers, etc</u>				
12		450 x 450mm x 40kg Stormwater grating and frame	No	4.00		
		<u>Municipal connection</u>				
13		Provide the sum of Eight Thousand eight hundred Rand (R8 800) for municipal connection	Item	1.00		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC</u>				
14		Excavation in earth not exceeding 1m deep for pipe trenches	m3	220.80		
15		Excavation in earth not exceeding 2m deep for holes, tranches, etc	m3	22.62		
16		Backfilling to pipe trenches compacted to 90% Mod AASHTO density	m3	91.08		
17		Selected filling (placed in 100mm uncompacted layers)	m3	55.20		
18		Unreinforced concrete bedding under pipes	m3	74.52		
		<u>PVC-U pipes</u>				
19		110mm Pipes laid in trenches (trenches elsewhere)	m	3200.00		
		<u>Draw wires</u>				
20		1,6mm Galvanised steel draw wires in pipes	m	3200.00		
		<u>Construct complete inspection chambers</u>				
21		1590 x 1590mm Brick inspection chamber not exceeding 1000mm deep internally (cover elsewhere)	No	8.00		
22		900 x 900mm x 72kg Cast iron single seal manhole cover and frame	No	8.00		
		<u>SUB-SOIL DRAINAGE</u>				
23		Excavation in earth not exceeding 1m deep for pipe trenches	m3	23.19		
24		Excavation in earth exceeding 1m and not exceeding 2m deep for pipe trenches	m3	122.40		
25		Excavation in earth exceeding 2m and not exceeding 4m deep for pipe trenches	m3	22.76		
26		Backfilling to pipe trenches	m3	108.59		
27		Backfilling to pipe trenches compacted to 93% Mod AASHTO density	m3	35.89		
28		Selected granular filling in bedding under and filling around pipes	m3	14.36		
		<u>Normal duty PVC-U sewer channels</u>				
29		110mm Channels in bottoms of inspection chambers	m	5.50		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Extra over normal duty PVC-U sewer channels for fittings</u>				
30		110mm Bend	No	1.00		
31		110mm Junction	No	2.00		
		<u>Heavy duty (Class 34) PVC-U sewer and drain pipes</u>				
32		110mm Pipes vertically or ramped to cleaning eyes etc (no excavation)	m	10.00		
33		110mm Pipes laid in and including trenches not exceeding 1m deep (trenches elsewhere)	m	15.35		
34		Ditto, but exceeding 1m not exceeding 2m deep	m	38.68		
35		160mm Pipes laid in and including trenches not exceeding 1m deep (trenches elsewhere)	m	19.97		
36		Ditto, but exceeding 1m not exceeding 2m deep	m	69.89		
37		Ditto, but exceeding 2m not exceeding 4m deep	m	13.52		
		<u>Extra over heavy duty (Class 34) PVC-U sewer and drain pipes for fittings</u>				
38		160mm Bend	No	4.00		
39		160mm Junction	No	4.00		
		<u>uPVC gulleys</u>				
40		160mm Gully not exceeding 500mm deep	No	1.00		
41		160mm Dished gully not exceeding 500mm deep	No	4.00		
		<u>Construct complete precast concrete circular inspection chambers, including benching (covers and channels elsewhere)</u>				
42		900mm Diameter inspection chamber not exceeding 2m deep internally	No	3.00		
43		1250mm Diameter inspection chamber exceeding 2mm and not exceeding 4mm deep internally	No	3.00		
		<u>Cast iron covers etc</u>				
44		900mm Diameter x 204kg pavement manhole cover and frame	No	3.00		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
45		1250mm Diameter x 504kg pavement manhole cover and frame	No	3.00		
		<u>The following in precast concrete inspection chambers</u>				
46		Excavation in earth not exceeding 2m deep	m3	11.45		
47		Excavation in earth exceeding 2m and not exceeding 4m deep	m3	36.82		
48		Unreinforced concrete in bottoms	m3	2.24		
		<u>SUNDRIES</u>				
49		Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m3	46.53		
50		Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock	m3	23.27		
51		Extra over excavation for pipe trenches, chambers, etc for carting away surplus material to a dumping site to be located by the contractor	m3	339.06		
52		Concrete encasing to 110mm horizontal pipes	m	10.00		
53		Concrete encasing to 110mm vertical bend	No.	3.00		
		<u>Municipal connection</u>				
54		Provide the sum of Eight Thousand Eight Hundred Rand (R8 800) for municipal connection	Item	1.00		
55		Testing soil drainage system	Item	1.00		
		<u>PIPE JACKING INSTATION</u>				
		<u>Jacking establishment</u>				
56		Fixed charges	Sum	1.00		
57		Time-related charges for jacking operations	Sum	1.00		
		<u>Excavation and backfilling</u>				
58		Excavate for pipes at the jacking face (including removal and disposal of surplus excavated material within a 0,5 km radius of the working area)	m3	107.86		
59		Extra over excavation in earth for excavation in soft rock	m3	10.79		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
60		Extra over excavation in earth for excavation in hard rock	m3	5.39		
		<u>Supply of pipes to be jacked</u>				
61		160 mm diameter pipe	m	56.86		
		<u>SANITARY FITTINGS</u>				
		<u>Wash hand basins:</u>				
62		Square wall-hung white wash hand basin size 473 x 473 x 645mm colour white with one centre taphole integrated overflow and chainstay hole, mounted to wall on and including two bolts	No	8.00		
		<u>Wash hand basin:</u>				
63		Square wall-hung white washhand basin size 609 x 442mm colour white with one centre taphole integrated overflow and chainstay hole, mounted to wall on and including two bolts	No	1.00		
		<u>Urinals:</u>				
64		Wall hung back inlet urinal, ultra Eco design to accommodate a water saving 0.9l flush, compact concealed trapway, control rear entry colour white with chromium plated back inlet spreader, 38mm chromium plated domical grating hung on and including two hanger brackets	No	4.00		
		<u>WC suites:</u>				
65		White top entry vitreous china wall hung washdown suite comprising 90° outlet open rim pan, size 570 x 370 x 400mm, with back inlet with icon soft close toilet seat with metal hinges and 'Orchid' element for wall hung wc, etc., concealed flush valve, protection cover for service opening and flush pipe, fitted on and including bolt-through the- wall bracket bolted to brick wall	No	9.00		
		<u>Stainless steel domestic inset sinks:</u>				
66		Double end bowl inset sink and drainer unit, size 1160 x 500mm overall with two bowls 410 x 343 x 167mm, including two 90mm waste outlets, built into worktop. (Worktop elsewhere)	No	2.00		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Stainless steel wash trough:</u>				
67		Wash trough and drainer unit, size 500 x 450 x 240mm overall, including 1,2mm gauge, built into worktop (Worktop elsewhere)	No	2.00		
		<u>Stainless steel slop hopper:</u>				
68		Slop Hopper and drainer unit, 1,2mm thick, including a 100mm high integral splash back to the rear and both sides	No	1.00		
		<u>Stainless steel catering sink:</u>				
69		Single bowl catering sink and drainer unit, size 500 x 500 x 230mm deep overall, 1,2mm gauge, with galvanized sheet and slatted under shelf, including splash backs under shelf	No	1.00		
		<u>Stainless steel single wash basin:</u>				
70		Stainless steel single rectangular wash basin wall-hung, size 550 x 350 x 140mm, 75mm tap ledge, with overflow	No	1.00		
		<u>WASTE UNIONS, ETC</u>				
		<u>Waste unions etc:</u>				
71		62mm Flange, 80mm long shank with integral overflow	No	9.00		
		<u>Stainless steel waste unions etc:</u>				
72		Urinal waste union (domical type)	No	4.00		
73		100 x 100mm square plate with brass	No	6.00		
74		90mm polished basket strainer with overflow connection	No	4.00		
75		40mm pvc waste outlet with basket and plug	No	4.00		
		<u>TRAPS, ETC</u>				
		<u>PVC traps, etc:</u>				
76		38mm PVC double bowl plumbing kit, 50/90mm outlet	No	6.00		
77		101mm PVC "P" trap	No	1.00		
		<u>Traps etc:</u>				
78		Chrome plated concealed trap and waste for wash hand basin	No	10.00		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Rubber traps etc:</u>				
79		P/S trap with universal connection for both in and out for 40mm and 50mm	No	3.00		
80		ditto, but with T connector to double waste	No	2.00		
		<u>TAPS, VALVES, ETC</u>				
		<u>Shower roses and accessories:</u>				
81		15mm Chrome plated single-function showerhead with self-cleaning nozzle, including 1/2 BSP female inlet	No	6.00		
		<u>Angle regulating valves:</u>				
82		15mm Ball type angle regulating valve, including waste adaptor	No	10.00		
		<u>Urinal flush valves:</u>				
83		Toilet Pan Flushmaster with push button flush valve for toilet top entry chrome-plated	No	9.00		
84		Exposed non-hold open feature, with 'Ball O Stop control inlet, wall flange, including matching flush pipes and other matching fittings, 600kPa	No	4.00		
85		35mm water supply flush valve, 1.2 straight flush pipe connected to CP on brass adaptor	No	1.00		
		<u>Washbasin mixer:</u>				
86		Single lever standard basin mixer, pillar type with single hole, dezincification resistant (DZR) brass	No	10.00		
87		Sink mixer	No	3.00		
		<u>Shower mixer:</u>				
88		Single lever shower mixer, Starlight chrome finish adjustable flow rate limiter escutcheon and shaft sealing optional temperature limiter	No	6.00		
		<u>Mixers:</u>				
89		15mm Chromium plated single-hole sink mixer with overarm swivel chrome outlet, mounting kit, angle valves and 234mm long flexible inlets	No	2.00		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Brass' hose tap:</u>				
90		22mm hose bib tap	No	5.00		
		<u>SANITARY PLUMBING</u>				
		<u>uPVC pipes:</u>				
91		40mm Pipes.	m	140.00		
92		50mm Pipes.	m	110.00		
93		50mm Pipes laid in trenches not exceeding 1m deep	m	80.00		
94		110mm Pipes.	m	80.00		
95		110mm Pipes laid in trenches not exceeding 1m deep	m	120.00		
96		40mm Pipes chased into brick walls.	m	10.00		
		<u>Extra over uPVC pipes for fittings:</u>				
97		50mm Straight reducer	No	24.00		
98		40mm Bend.	No	46.00		
99		50mm Bend.	No	24.00		
100		110mm Bend.	No	40.00		
101		40mm Access bend	No	24.00		
102		50mm Access bend.	No	12.00		
103		40mm Junction.	No	24.00		
104		110mm Junction.	No	24.00		
105		110mm Access bend.	No	12.00		
106		40mm Access junction.	No	24.00		
107		50mm Access junction.	No	12.00		
108		110mm Access junction.	No	24.00		
109		110mm Double junction.	No	12.00		
110		110mm Rodding eye.	No	8.00		
111		110mm Access bend with anti-syphon horn.	No	8.00		
112		50 x 40mm Access reducing junction.	No	24.00		
113		110 x 50mm Access reducing junction.	No	24.00		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
114		110mm Pan connector.	No	24.00		
115		50mm Air release vent valve.	No	12.00		
116		110mm Air release vent valve.	No	8.00		
117		50mm Vent cowl.	No	8.00		
118		110mm Vent cowl.	No	8.00		
		<u>Sundries:</u>				
119		Testing waste pipe system.	Item	1.00		
		<u>WATER SUPPLIES</u>				
		<u>High density black polyethylene (HDPE) pipes with and including compression fittings:</u>				
120		25mm Piping laid in trenches not exceeding 1m deep.	m	40.00		
		<u>Extra over HDPE pipes for polypropylene compression fittings:</u>				
121		25mm Fittings.	No	70.00		
		<u>Class 2 copper pipes:</u>				
122		15mm Pipes.	m	90.00		
123		22mm Pipes.	m	32.00		
124		28mm Pipes.	m	42.00		
125		15mm Pipes chased into brick walls.	m	264.00		
126		22mm Pipes chased into brick walls.	m	32.00		
127		28mm Pipes chased into brick walls.	m	21.00		
		<u>Extra over class 2 copper pipes for capillary fittings:</u>				
128		15mm Fittings.	No	280.00		
129		22mm Fittings.	No	48.00		
130		28mm Fittings.	No	63.00		
		<u>Copper overflow and service pipes:</u>				
131		15mm Braided flexible connector 350mm girth.	No	60.00		
132		15mm Braided flexible connector 500mm girth.	No	14.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Sundries:</u>				
133		Cut into existing 28mm copper or polycarb pipe and join new 25mm HDPE pipe including all necessary fittings etc	No	1.00		
		<u>TESTING</u>				
		<u>Testing:</u>				
134		Testing water pipe system.	Item	1.00		
		<u>ELECTRIC WATER HEATERS</u>				
		<u>electric hot-water storage geyser, complete with all required valves, gauges, drip tray, vacuum breakers, shut-off valve on the cold-water supply, pressure-temperature control valve with drain piping, thermostat, sacrificial anode, and power wiring from the isolator. Unit to be installed strictly in accordance with the manufacturer's specifications and relevant SANS standards</u>				
135		200 Liter wall electric water heater.	No	1.00		
		<u>Fire hydrant pedestals</u>				
144		Unreinforced concrete hydrant pedestal 700mm high, cast around vertical pipe with bottom 300mm below ground, 400 x 400mm square at base and tapering to 200 x 305mm overall octagonal shaped top, including excavation, formwork and two coats of paint to exposed surfaces	No	1.00		
		<u>WATER SUPPLIES TO FIRE APPLIANCES</u>				
145		Excavation in earth not exceeding 1m deep for pipe trenches	m3	36.00		
146		Excavation in earth not exceeding 1m deep for pipe trenches, holes, etc	m3	3.74		
147		Backfilling to pipe trenches compacted to 90% Mod AASHTO density	m3	13.50		
148		Selected filling (placed in 100mm uncompact layers) compacted to 90% Mod AASHTO density	m3	4.50		
149		Selected granular filling in bedding under and filling around pipes	m3	18.00		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Class 16 PVC-U pressure pipes with rubber ring joints</u>				
150		110mm diameter Pipes laid in and including trenches not exceeding 1m deep	m	90.00		
		<u>Extra over class 16 PVC-U pressure pipes for uPVC pressure fittings with rubber rings</u>				
151		110mm Bend	No	10.00		
152		110mm Tee	No	8.00		
153		110mm BSP adaptor	No	4.00		
		<u>Extra over class 16 PVC-U pressure pipes for cast iron pressure fittings</u>				
154		110mm End cap	No	2.00		
155		110mm Reducer	No	10.00		
156		110mm Tee	No	10.00		
157		110mm Reducing tee	No	8.00		
		<u>Galvanised steel pipes</u>				
158		80mm Pipes	m	80.00		
159		80mm Pipes chased into brickwork	m	10.00		
160		80mm pipes laid in and including trenches not exceeding 1m deep	m	10.00		
		<u>Extra over galvanised steel pipes for steel fittings</u>				
		<u>80mm Fittings</u>				
161		80mm Bush	No	30.00		
162		80mm Elbow	No	30.00		
163		80mm Bend	No	30.00		
164		80mm Tee	No	30.00		
165		80mm Reducing tee	No	10.00		
166		80mm Longscrew connector	No	10.00		
167		80mm Union	No	10.00		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Sundries</u>				
168		Unreinforced concrete in thrust blocks in trenches at bends, tees, etc, including extra excavation, formwork, etc	m3	1.00		
169		400 x 324 x 152mm x 24kg Cast iron stopcock box including brick chamber below 800mm deep internally	No	5.00		
170		600x 450 x 40mm x 38kg Cast iron meter box and valve chamber, including brick chamber below 800mm deep internally	No	2.00		
		<u>Municipal connection</u>				
171		Provide the sum of Eight Thousand and eighty Rand (R8 000) for municipal connection	Item	1.00		
		<u>Testing</u>				
172		Testing fire water pipe system	Item	1.00		
		Total carried to summary				

17. Plumbing & Drainage

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
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		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		BILL NO. 16				
		TILING				
		WALL TILING				
1		Wall tiles 1. 300 x 200mm glazed and rectified premium porcelain wall tiles, fixed to internal wall plaster/plasterboard backing with approved tile adhesive, 2-3mm grout to match on walls	m2	34.39		
2		Walls tiles 2. 300 x 200mm glazed and rectified premium porcelain wall tiles, fixed to internal wall plaster/plaserboard backing with approved tile adhesive. 2-3mm grout to match. Tile and grout colour to be selected. Natural Anodised edge trims visible tile edges. On walls	m2	345.25		
3		Wall tiles 3. 300 x 200mm glazed and rectified premium porcelain wall tiles, fixed to internal wall plaster /plasterboard backing with approved tile adhesive. 2-3mm grout to match. Tile and grout colour to be selected. Natural Anodised edge trims visible tile edges. on walls	m2	46.31		
		FLOOR TILING				
4		Tile 1 - large format full body porcelain lapato floor 600x600 or similar, to be selected from premium range full bodied rectified high traffic glazed lappato tiles, set in manufacturer approved adhesive, and with 2mm water resistant grout (colour to be selected) On floors	m2	115.32		
5		SKIRTING: 120mm high matching tile skirting with edge trims along all walls	m	160.96		
		Total carried to summary				

18. Tiling

		Tile 2 - medium format full body porcelain lapato floor: 300x300 or similar, to be selected from premium range full bodied rectified high traffic glazed lappatotiles, set in manufacturer approved adhesive, and with 2mm water resistant grout (colour to be selected)				
6		on floors	m2	94.27		
7		SKIRTING: 120mm high matching tile skirting with edge trims along	m	90.51		
		Tile 3 - Mosaic full body porcelain glazed matt floor: 50x50 or similar, to be selected from premium range full bodied glazed mosaic tiles, set in manufacturer approved adhesive for wet areas, and with water resistant grout (colour to be selected).				
8		On floors	m2	4.93		
		Total carried to summary				

18. Tiling

page 1

page 2

		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>BILL NO17</u>				
		<u>GLAZING</u> <u>GLAZING TO STEEL WITH PUTTY</u>				
		TOPS, SHELVES, DOORS, MIRRORS, ETC				
		<u>6mm Silvered float glass copper backed mirrors with polished edges holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u>				
		Mirror 450 x 600mm high	no	15.00		
		Mirror 600 x 1800mm high	no	2.00		
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>BILL NO 18</u>				
		<u>PAINTWORK</u>				
		<u>PAINTWORK ETC TO NEW WORK</u>				
		<u>ON FLOOR SURFACES</u>				
		<u>Provide and apply three-coat two-component polyurethane enamel coating for system, including surface preparation and application to manufacturer's specifications, executed by an approved specialist applicator</u>				
1		Floors	m2	223.00		
		<u>ON INTERNAL FLOATED PLASTER SURFACES</u>				
		<u>Prepare, prime and finish concrete wall surfaces and apply two coats of approved matt interior premium-grade acrylic wall paint, completed to manufacturer's requirements.</u>				
2		Concrete walls	m2	66.87		
		<u>ON EXTERNAL FLOATED PLASTER SURFACES</u>				
		<u>Provide and apply one coat acrylic primer and two coats approved water-based acrylic wall coating (light grey), applied by brush, roller or spray, with required drying intervals, all to manufacturer's specification</u>				
3		Walls	m2	116.90		
		<u>One coat of acrylic primer and two coats of water-based textured/acrylic wall coating, applied by brush, roller or spray, in medium grey, allowing appropriate drying time between coats and in accordance with the manufacturer's specifications</u>				
4		Walls	m2	397.23		
		<u>One coat of acrylic primer and two coats of water-based acrylic wall coating, applied by brush, roller, or spray, in medium grey, allowing adequate drying time between coats and strictly in accordance with the manufacturer's specifications</u>				
5		Walls	m2	89.81		
		Total carried to summary				

20. Paintwork

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>ON PLASTERBOARD SURFACES</u>				
		<u>One coat of acrylic primer and two coats of water-based acrylic wall coating, applied by brush, roller, or spray, in medium grey, allowing adequate drying time between coats and strictly in accordance with the manufacturer's specifications</u>				
6		On walls	m2	254.71		
		<u>One coat prime and two coats emulsion paint with brilliant white humidity and mold resistant</u>				
7		Prime and paint with brilliant white humidity and mold resistant				
		Ceilings	m2	167.00		
8		Galvanized roof beams, purlins and bracing. Paint Insulation	m2	155.00		
		<u>Apply approved epoxy primer and polyurethane topcoat spray paint system suitable for marine/port environment (C4/C5 corrosivity).</u>				
		<u>Balustrade</u>				
9		Balustrade	m	55.00		
		<u>Sills</u>				
10		Sills	m	79.00		
		Total carried to summary				

20. Paintwork

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		page 1				
		page 2				
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		BILL NO.19				
1		<p><u>Mechanical Installation</u> <u>Fire Protection, Water Reticulation, Air conditioning and ventilation systems</u></p> <p>Allow for all the preliminary and general items required to provide the health & safety, mechanical & electrical installation for this project,</p>				
2		<p><u>GUARANTEE AND MAINTENANCE</u> Guarantee and maintenance for the complete installation of mechanical installation including materials and workmanship for a period of TWELVE MONTHS after date of completion</p>	Sum	1.00		
3		<p><u>REMOVAL OF WASTE</u> Tenderer to allow for all costs associated with cleaning the site of all rubbish and waste caused by this contract</p>	Sum	1.00		
4		<p><u>COMMISSIONING AND TESTING</u> Allow for testing and commissioning the whole of the Mechanical Installation as laid down in the specification and for re-testing as may be required after the making good of all defective work to the satisfaction of the Consulting Engineer.</p>	Sum	1.00		
5		<p><u>CERTIFICATE FOR COMPLIANCE</u> Provision for the Certificate of Compliance to be issued on completion of the project.</p>	Sum	1.00		
6		<p><u>CONTRACTORS SHOP DRAWINGS</u> Contract shop drawings prepared in accordance with coordinated Architectural, Structural & Service layouts.</p>	Sum	1.00		
7		<p><u>PROGRAMMING OF WORKS</u> <u>PRESSURE TEST PIPING</u> Pressure Testing & Inspection of all pipework to meet design specifications.</p>	Sum	1.00		
8		<p><u>SCAFFOLDING</u> Provision of Scaffolding for installation of equipment at high level.</p>	Sum	1.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
9		<u>OPERATION & MAINTENANCE MANUALS</u> Provision of Operating and Maintenance Manuals as per the Technical Specification.	Sum	1.00		
10		<u>Cleaning, disinfecting, and treating air-conditioning equipment using an approved HVAC cleaning and antimicrobial treatment system, including coil cleaning, duct sanitation (if applicable), and condensate tray treatment, carried out in accordance with the manufacturer's and specialist technician's recommendations.</u> Provision of Treatment	Sum	1.00		
11		<u>Variable refrigerant flow (VRF) outdoor condensing unit, inverter-driven, heat-pump type, with multiple refrigerant ports, integrated control electronics, and capacity matched to connected indoor units, complete with mounting, vibration isolation, and commissioning to manufacturer and engineer requirements</u> <u>Variable flow OUTDOOR UNIT</u> Supply with all required accessories, deliver, install, wire to weather proof mechanical DB's connect refrigerant lines and commission as per specification the following outdoor units for use as per design parameters:				
12		MULTI V 5 OUTDOOR UNIT MODEL NUMBER: ARUN480LTE5	No	1.00		
		Supply and Fill Refrigerant gas for HVAC system 9kg	No	1.00		
		<u>Variable refrigerant flow (VRF) indoor fan-coil units, approved equivalent type, complete with electronic expansion valves, condensate drains, washable filters, mounting brackets, and control interface modules, fully compatible with the selected VRF outdoor system and installed to manufacturer and engineer requirements</u>				
13		Supply will all required accessories, deliver, install, wire to isolators, connect refrigerant lines and commission as per specification the following Ceiling Mounted Cassette Units and Concealed unit complete with hard wired thermostat remote controls, face panel, return filter, control wiring and commissioning:				
14		Ceiling cassette - 4 way, model no: arnu54gtmc4	No	2.00		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
15		Ceiling cassette - 4 way, model no: arnu21gtqb4	No	2.00		
16		Ceiling cassette - 4 way, model no: arnu12gtrb4	No	6.00		
17		Ceiling unit -1 way, model no: arnu18gttc4	No	1.00		
18		Fresh air intake unit, model no: arnu76gb8z4	No	1.00		
19		Ceiling unit -2 way, model no: arnu12gtsa4	No	2.00		
		<u>MULTI V HEAT ROCOVERY UNITS, HYDRO KIT, HEAT EXCHANGER</u>				
20		Supply with all required accessories, deliver, install, wire to isolators, connect refrigerant lines and commission the following Heat Recovery Units, Hydrokit Unit and HEAT Exchanger:				
21		Heat recovery unit - 4 port, model no: prhr043a	No	1.00		
22		Heat recovery unit - 8 port, model no: prhr083	No	2.00		
23		Vrf water heating hydro kit high temp, model no: arnh08gk3a4	No	1.00		
24		Gasketed plate heat exchanger, model no: se 0020+ 007a00 qnpv0jj 11 / 29 plates max / single pass	No	1.00		
25.0		<u>Condenser and Refrigerant pipes :</u>				
		Supply with all required accessories, deliver, install and commission the following refrigerant lines, condensate piping and valves complete Insulation:				
26		Y-branch pipe :high pressure gas pipe , copper	No	3.00		
27		Y-branch pipe : liquid pipe, copper	No	5.00		
28		Y-branch pipe: low pressure gas pipe , copper	No	3.00		
29		Y-branch pipe : gas pipe , copper	No	2.00		
30		Refrigerant stopper valve model no: prvt120 , copper	No	27.00		
31		Refrigerant stopper valve model no: prvt780, copper	No	11.00		
32		Refrigerant stopper valve model no: prvt980 , copper	No	3.00		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
33		Refrigerant straight pipe: 1/2 (inch) , copper	m	217.9		
34		Refrigerant straight pipe: 1/4 (inch), copper	m	217.9		
35		Refrigerant straight pipe: 3/4 (inch), copper	m	24.7		
36		Refrigerant straight pipe: 3/8 (inch), copper	m	44.9		
37		Refrigerant straight pipe: 5/8 (inch), copper	m	52.1		
38		Refrigerant straight pipe: 7/8 (inch), copper	m	21.1		
39		Refrigerant straight pipe: 1+1/8 (inch), copper	m	31.9		
40		Refrigerant straight pipe: 1+3/8 (inch), copper	m	2		
41		Refrigerant straight pipe: 1+5/8 (inch), copper	m	8.8		
42		Refrigerant : 1/2 (inch) , 90° elbow, copper	No	98		
43		Refrigerant : 1/4 (inch), 90° elbow, copper	No	98		
44		Refrigerant : 3/4 (inch), 90° elbow, copper	No	36.00		
45		Refrigerant : 3/8 (inch), 90° elbow, copper	No	40.00		
46		Refrigerant : 5/8 (inch), 90° elbow, copper	No	41.00		
47		Refrigerant : 7/8 (inch), 90° elbow, copper	No	21.00		
48		Refrigerant : 1+1/8 (inch), 90° elbow, copper	No	37.00		
49		Refrigerant : 1+3/8 (inch), 90° elbow, copper	No	4.00		
50		Refrigerant : 1+5/8 (inch), 90° elbow, copper	No	12.00		
51		Refrigerant : 1/2 (inch) , straight coupling, copper	No	55.00		
52		Refrigerant : 1/4 (inch), straight coupling, copper	No	55.00		
53		Refrigerant : 3/4 (inch), straight coupling, copper	No	7.00		
54		Refrigerant : 3/8 (inch), straight coupling, copper	No	12.00		
55		Refrigerant : 5/8 (inch), straight coupling, copper	No	14.00		
56		Refrigerant : 7/8 (inch), straight coupling, copper	No	6.00		
57		Refrigerant : 1+1/8 (inch), straight coupling, copper	No	8.00		
58		Refrigerant : 1+3/8 (inch), straight coupling, copper	No	1.00		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
59		Refrigerant : 1+5/8 (inch), straight coupling, copper	No	3.00		
60		Refrigerant : 1/2 (inch) , 45° elbow, copper	No	30.00		
61		Refrigerant : 1/4 (inch), 45° elbow, copper	No	30.00		
62		Refrigerant : 3/4 (inch), 45° elbow, copper	No	11.00		
63		Refrigerant : 3/8 (inch), 45° elbow, copper	No	12.00		
64		Refrigerant : 5/8 (inch), 45° elbow, copper	No	13.00		
65		Refrigerant : 7/8 (inch), 45° elbow, copper	No	7.00		
66		Refrigerant : 1+1/8 (inch), 45° elbow, copper	No	12.00		
67		Refrigerant : 1+3/8 (inch), 45° elbow, copper	No	2.00		
68		Refrigerant : 1+5/8 (inch), 45° elbow, copper	No	4.00		
69		Drainage: Straight pipe , 25 mm Dia, PVC-U, Class 4, SANS966-1	m	46.07		
70		Drainage: Straight pipe , 50 mm Dia, PVC-U, Class 4, SANS966-1	m	73.00		
71		Drainage: 25 mm Dia, 90° Elbow, PVC-U, Class 4, SANS966-1	No	35.00		
72		Drainage: 50 mm Dia, 90° Elbow, PVC-U, Class 4, SANS966-1	No	20.00		
73		Drainage: 25 mm Dia, TEE , PVC-U, Class 4, SANS966-1	No	17.00		
74		Drainage: 50 mm Dia, REDUCING TEE 25MM BRANCH X 50MM MAIN, PVC-U, Class 4, SANS966-1	No	24.00		
75		Drainage: 25 mm Dia, Straight coupling, PVC-U, Class 4, SANS966-1	No	22.00		
76		Drainage: 50 mm Dia, Straight coupling, PVC-U, Class 4, SANS966-1	No	14.00		
77		Drainage: 25 mm Dia, 45° Elbow, PVC-U, Class 4, SANS966-1	No	18.00		
78		Drainage: 50 mm Dia, 45° Elbow, PVC-U, Class 4, SANS966-1	No	10.00		
79		Design of Supports for mechanical works. Supports inclusive of refrigerant pipe supports, Condensate drain piping Supports, Ducting supports and Mechanical Equipment supports. Incl fasteners and vibration pads and dumpers where required	Sum	1.00		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
80		Supply and delivery of Supports for mechanical works. Supports inclusive of refrigerant pipe supports, Condensate drain piping Supports, Ducting supports and Mechanical Equipment supports. Incl fasteners and vibration pads and dumpers where required	Sum	1.00		
81		Installation of Supports for mechanical works. Supports inclusive of refrigerant pipe supports, Condensate drain piping Supports, Ducting supports and Mechanical Equipment supports. Incl fasteners and vibration pads and dumpers where required	Sum	1.00		
82		Design, Supply and install supports for all HVAC Ducting	Sum	1.00		
		<u>DUCTING SYSTEM</u>				
85		Supply, deliver, Install, test and commission the following duct work with all mechanical equipment for the ventilation systems as per the drawings and Specification.				
86		1500 x 500mm Straight Duct Galvanised Sheet, Rigid	m	1.5		
87		1000 x 500mm Straight Duct Galvanised Sheet, Rigid	m	3.5		
88		500 x 500mm Straight Duct Galvanised Sheet, Rigid	m	11.9		
89		400 x 400mm Straight Duct Galvanised Sheet, Rigid	m	13.4		
90		350 x 350mm Straight Duct Galvanised Sheet, Rigid	m	1.775		
91		350 X 250mm Straight Duct Galvanised Sheet, Rigid	m	3.6		
92		300 x 300mm Straight Duct Galvanised Sheet, Rigid	m	11.32		
93		250 x 250mm Straight Duct Galvanised Sheet, Rigid	m	14.6		
94		200 x 200mm Straight Duct Galvanised Sheet, Rigid	m	16.2		
95		150 x 150mm Straight Duct Galvanised Sheet, Rigid	m	3		
96		Ø 125mm Straight Duct Galvanised Sheet, Rigid	m	14		
97		Ø 160mm Straight Duct Galvanised Sheet, Rigid	m	16		
98		Ø 200mm Straight Duct Galvanised Sheet, Rigid	m	26.9		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
99		Ø 250mm Straight Duct Galvanised Sheet, Rigid	m	2		
100		Ø 125mm Straight Duct Insulated Flexible Duct, Flexible	m	7		
101		Ø 160mm Straight Duct Insulated Flexible Duct, Flexible	m	7		
102		Ø 200mm Straight Duct Insulated Flexible Duct, Flexible	m	7		
103		Ø 250mm Straight Duct Insulated Flexible Duct, Flexible	m	1		
104		(1500 x 500) to (1000 x 500)mm Reducer,Rect Galvanised sheet, Transition, Rectangular, two sides parallel symmetrical	No	1		
105		(1000 x 500) to (500 x 500)mm Reducer,Rect Galvanised sheet, Transition, Rectangular, two sides parallel symmetrical	No	1		
106		(500 x 500) to (400 x 400)mm Reducer,Rect Galvanised sheet, Transition, Rectangular, to Rectangular	No	1		
107		(Size to suit selected ACU-5) to (350x 350)mm Redcurrant Galvanised sheet, Transition, Rectangular, to Rectangular	No	1		
108		(400 x 400) to (300x 300)mm Reducer,Rect Galvanised sheet, Transition, Rectangular, to Rectangular	No	1		
109		(300 x 300) to (350x 250)mm Reducer,Rect Galvanised sheet, Transition, Rectangular, to Rectangular	No	1		
110		(350 x 250) to (250x 250)mm Reducer,Rect Galvanised sheet, Transition, Rectangular, to Rectangular	No	1		
111		(200x200) to (300x100) mm Reducer,Rect F.O.T (Flat On Top) Galvanised sheet, Transition, Rectangular, to Rectangular	No	2		
112		(500 x 500) to (250x 250)mm Reducer,Rect Galvanised sheet, Transition, Rectangular, to Rectangular	No	1		
113		(500 x 500) to suit selected Fan equipment (500Dia.)mm Reducer,Rect to Round Galvanised sheet, Transition, Rectangular to Round	No	1		
114		(150 x 150) to (Ø125)mm Reducer,Rect to Round Galvanised sheet, Transition, Rectangular to Round	No	1		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
115		(200 x 200) to (Ø160)mm Reducer, Rect to Round Galvanised sheet, Transition, Rectangular to Round	No	1		
116		(250 x 250) to (Ø160)mm Reducer, Rect to Round, Transition, Rectangular to Round	No	2		
117		size fo suit Selected fan EFD-2 (Ø200)mm Flexible connector, Flexible connection	No	2		
118		size fo suit Selected SFD-1 and attenuators (Ø500)mm Flexible connector, Flexible connection	No	2		
119		size fo suit Selected ACU-5 AHU, rectangularmm Flexible connector Galvanised sheet, Flexible connection	No	2		
120		Ø 125mm Elbow Galvanised sheet, 90 Degree, r/D=1.5. DIE stamped Elbow	No	3		
121		Ø 200mm Elbow Galvanised sheet, 90 Degree, r/D=1.5. DIE stamped Elbow	No	9		
122		Ø 160mm Elbow Galvanised sheet, 90 Degree, r/D=1.5. DIE stamped Elbow	No	9		
123		(400 x 400)mm Elbow Galvanised sheet, 90 Degree, r/D=1.5. Smooth Radius	No	1		
124		(300 x 300)mm Elbow Galvanised sheet, 45 Degree, r/D=1.5. Smooth Radius	No	2		
125		(300 x 300)mm Elbow Galvanised sheet, 90 Degree, r/D=1.5. Smooth Radius	No	2		
126		(250 x 250)mm Elbow Galvanised sheet, 90 Degree, r/D=1.5. Smooth Radius	No	1		
127		(200 x 200)mm Elbow Galvanised sheet, 90 Degree, r/D=1.5. Smooth Radius	No	1		
128		To Suit ACU-5 AHU (1600 x 500 x 700)mm Planum Box, insulated with stiffners Galvanised sheet,	No	2		
129		350 x 350mm Duct End Caps Galvanised sheet, Rectangular	No	1		
130		250 x 250mm Duct End Caps Galvanised sheet, Rectangular	No	2		
131		200 x 200mm Duct End Caps Galvanised sheet, Rectangular	No	1		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
132		150 x 150mm Balancing Dumper Galvanised sheet, Rectangular	No	1		
133		200 x 200mm Balancing Dumper Galvanised sheet, Rectangular	No	2		
134		350 x 350mm Balancing Dumper Galvanised sheet, Rectangular	No	1		
135		Ø 160mm Balancing Dumper Galvanised sheet, Round	No	3		
136		Ø 125mm Balancing Dumper Galvanised sheet, Round	No	4		
137		150 x 150mm TAP, Rectangular Galvanised sheet, 45 DEG ANGLE Branch, Rectangular MAIN	No	1		
138		200 x 200 mm TAP, Rectangular Galvanised sheet, 45 DEG ANGLE Branch, Rectangular MAIN	No	2		
139		350 x 350 mm TAP, Rectangular Galvanised sheet, 45 DEG ANGLE Branch, Rectangular MAIN	No	1		
140		350 x 350 mm TAP, Rectangular Galvanised sheet, Plunum Box TAP, Rectangular MAIN	No	1		
141		Ø 125mm Tap,Round Galvanised sheet, Branch, Rectangular MAIN	No	7		
142		Ø 160mm Tap,Round Galvanised sheet, Branch, Rectangular MAIN	No	3		
143		Ø 200mm Tap,Round Galvanised sheet, Branch, Rectangular MAIN	No	7		
144		(1500 x 500)mm filter box c/w filters galvanised sheet, filter unit-side access filter housing(1 off), c/w removable filters primary filter : self supporting pleated washable filters, g4 class minimum, 50 mm deep (1 off) secondary filter : self supporting pocket filter to suite, f8 class minimum, 450 mm deep (1 off)	Sum	1		
145		Supply and install insulation of Insulation for the ACU (AHU) unit Supply ducting diffusers and return and Supply Plunum Boxes. ,	Sum	1		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Air Diffusers and Louvers: Supply, Deliver, Install, Balance and Commission.</u>				
146		EXTRACT DICS VALVE MODEL: LVS/160/G1 Supply with 600x600mm Adaptor Plate and Suframe	No	2		
147		Shutter louver model: vk-50/548x548/pvc/colour to architect details pvc uv protected shutter louver for protection against direct ingress of rain, leaves and birds into the discharge openings of ventilation system wire mesh screen rear, finish to architects details.	No	3		
148		Weather louvermodel: awk/1/500x500/op/0/p1/colour to architect details aluminum weather reistant louver for protection against direct ingress of rain, leaves and birds into the intake and discharge openings of ventilation systeme comprising of borderframe with rain restant blade sections and wire mesh screen rear, finish epoxycoated to architects details.	No	2		
149		Weather louver awk/1/250x250/op/0/p1/colour to architect details aluminum weather reistant louver for protection against direct ingress of rain, leaves and birds into the intake and discharge openings of ventilation systeme comprising of borderframe with rain restant blade sections and coated to architects details. wire mesh screen rear, finish epoxy	No	3		
150		Shutter louver model: vk-20/243x243/pvc/colour to architect details pvc uv protected shutter louver for protection against direct ingress of rain, leaves and birds into the discharge openings of ventilation system wire mesh screen rear, finish to architects details.	No	2		
151		Weather louver model: awk/1/1500x500/op/0/p1/colour to architect details aluminum weather reistant louver for protection against direct ingress of rain, leaves and birds into the intake and discharge openings of ventilation system comprising of borderframe with rain restant blade sections and wire mesh screen rear, finish epoxy coated to architects details.	No	1		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
152		Weather louver model: awk/1/300x300/op/0/p1/colour to architect details aluminum weather reistant louver for protection against direct ingress of rain, leaves and birds into the intake and discharge openings of ventilation system comprising of borderframe with rain restant blade sections and wire mesh screen rear, finish epoxy coated to architects details.	No	1		
153		Door grill model: ags-t/1/300x400/1/0 door grille with matching rear frame,natural anodised. aluminum	No	1		
154		Door grill model: ags-t/1/250x400/1/0 door grille with matching rear frame,natural anodised. aluminum	No	3		
155		Door grill model: ags-t/1/500x400/1/0 door grille with matching rear frame,natural anodised. aluminum	No	2		
156		Door grill model: ags-t/1/250x500/1/0 door grille with matching rear frame,natural anodised. aluminum	No	1		
157		Return air grill model: ah-a/400x400/op/28/3/0/colour to archite's spec natural anodized return air grille. finish to architects details.	No	3		
158		Return air grill model: at-ag/200x100/op/28/3/0/colour to architec's spec natural anodized return air grill, duct mounted finish to archtect's details	No	2		
159		Return air grill model: ah-ag/500x500/op/28/3/0/colour to architec's spec natural anodized return air grill, duct mounted.finish to architect's details	No	1		
160		Air diffuser, three way pattern model: adlq-ck-h-u-0-0/356x356x%%c200/of/3/ / *f aluminum air diffuser with side entry plenum box, with opposite blade volume dumper adjustable from diffuser face. colour and finish to architect's detail., supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	2		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
161		Air diffuser, two way pattern model: adlq-ck-v-u-0-c/356x356x%%c125/of/2//*/f aluminum air diffuser with top entry plenum box, with opposite blade volume dumper adjustable from diffuser face. colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	1		
162		Air diffuser, one way pattern model: adlq-ck-h-u-0-c/356x356x%%c125/of/1//*/f aluminum air diffuser with side entry plenum box,with opposite blade volume dumper adjustable from diffuser face. colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	1		
163		Air diffuser, roundmodel: dcv/200/-/-p1/ colour to arch's detail aluminum air diffuser with opposite blade volume dumper adjustable from diffuser face. colourand finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	3		
164		Air diffuser, two way patternmodel: adlq-ck-v-u-0-c/356x356%%c200/of/2e/ /*/f aluminum air diffuser with top entry plenum box, with opposite blade volume dumper adjustable from diffuser face, *colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	1		
165		Air diffuser, one way pattern model: adlq-ck-v-u-0-c/356x356x%%c160/of/1//*/f aluminum air diffuser with top entry plenum box, with opposite blade volume dumper adjustable from diffuser face, *colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	1		
166		Air diffuser, four way pattern model: adlq-ck-h-u-0-o/595x595x%%c250/of/4/ /*/f aluminum air diffuser with side entry plenum box, with opposite blade volume dumper adjustable from diffuser face, colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	1		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
167		Air diffuser, one way patternmodel: adlq-ck-h-u-0-0/595x595x%%c250/of/10/*f aluminum air diffuser with side entry plenum box, with opposite blade volume dumper adjustable from diffuser face. colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	1		
168		Air diffuser, two way patternmodel: adlq-ck-v-u-0-c/356x356%%c200/of/2/1/*f aluminum air diffuser with top entry plenum box, with opposite blade volume dumper adjustable from diffuser face, *colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	1		
169		Air diffuser, four way pattern model: adlq-ck-h-u-0-o/595x595x%%c300/of/4/1/*f aluminum air diffuser with side entry plenum box, with opposite blade volume dumper adjustable from diffuser face, colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	1		
170		Air diffuser, one way patternmodel: adlq-ck-h-u-0-0/595x595x%%c300/of/11/*f aluminum air diffuser with side entry plenum box, with opposite blade volume dumper adjustable from diffuser face. colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	1		
171		Air diffuser, two way pattern model: adlq-ck-v-u-0-c/356x356%%c160/of/2e/1/*f aluminum air diffuser with topeentry plenum box, with opposite blade volume dumper adjustable from diffuser face, *colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	1		
172		Air diffuser, two way pattern model: adlq-ck-v-u-0-c/356x356%%c125/of/2e/1/*f aluminum air diffuser with top entry plenum box, with opposite blade volume dumper adjustable from diffuser face, *colour and finish to architect's detail. supply with suitable ceiling dapter plate 600x600mm and mounting accessories	No	2		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Fire Dumpers: Supply, Deliver, Install, Balance and Commission.</u>				
173		Fussable link shutter type fire dumper model: fsdl-11/500x500 supply with all required installation accessores	No	2		
174		Fussable link shutter type fire dumper model: fsdl-11/400x400 supply with all required installation accessores	No	1		
175		Fire dumper, electric equator model: fdf-e-1/0/c/500x500/600 electric equator 230v spr.return, supply with all required installation accessores	No	1		
176		Fire dumper, electric equator model: fdf-e-1/0/c/300x300/400 electric equator 230v spr.return, supply with all required installation accessores	No	1		
		<u>Fans: Supply, Deliver, Install, Balance and Commission.</u>				
177		wall mounted fanmodel: wx-9 supply with all required installation accessores	No	7		
178		Window mounted fan model: gx-12 supply with all required installation accessores	No	2		
179		Wall mounted fan model: aw 200e2-c supply with all required installation accessores	No	2		
180		Wall mounted axial fan model: aw 500dv sileo supply with all required installation accessores	No	3		
181		Inline ducted fan model: k150 m sileo supply with all required installation accessores	No	2		
182		Inline ducted fan model: k200 m sileo supply with all required installation accessores	No	1		
183		Inline ducted fan model: ktex 50-30-4 explosion proof, supply with all required installation accessores for flammable stores enviroment	No	1		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
184		Inline ducted fan model: kv duo 630 ec supply with all required installation accessories	No	1		
185		Sound attenuators to suit sfd-1 model: size and performance to suit selected sfd-1	No	2		
186		Wind turbine roof ventilation fan model: 610mm tornado-aluminum supply with all required installation accessories	No	2		
187		Design supply and carbon mono-oxide sensor and control system. connect the system to control fans in apparatus bay (model: supply with all required installation accessories, to be installed in apparatus bay	No	1		
188		HUMIDSTAT XRH MODEL: XRH Stand alone humidistat switches fan On/Off when RH reaches preset levels. Complete with pull cord override switch to be installed in the Male and female shower fan (EXF1 and EXF3 male and female change rooms)	No	2		
189		PASSIVE INFRARED Movement Sensor MODEL: 90219AW To be installed in Toilet Spaces	No	10		
190		Time delay units MODEL: DT20 To be installed in Toilet Spaces and Kitchens	No	8		
		<u>Water Reticulation System:</u>				
191		For the design, supply, delivery, installation testing and Commissioning of the Water reticulation system including connection pipework, supports, hangers, pipe fittings, valves, pumps and control systems as per the manufacturer's specification and recommendations. Provision shall also be made for all plinths/foundations required under the relevant plant.				
		<u>Pipe Lengths</u>				
192		Pipe, DN 65: copper pipe	m	6		
193		Pipe, DN 50: copper pipe	m	12		
194		Pipe, DN 40: copper pipe	m	2		
195		Pipe, DN 32: copper pipe	m	28		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
196		Pipe, DN 25: copper pipe	m	40		
197		Pipe, DN 22: copper pipe	m	15		
198		Pipe, DN 20: copper pipe	m	35		
199		Pipe, DN 15: copper pipe	m	24		
200		Pipe, DN 15: hdpe pipe	m	24		
		<u>Tee fittings</u>				
201		Tee, DN 65 x DN 65 x DN 65: copper pipe	no	1		
202		Tee, DN 50 x DN 50 x DN 50: copper pipe	no	2		
203		Tee, DN 40 x DN 22 x DN 40: copper pipe	no	1		
204		Tee, DN 32 x DN 25 x DN 25: copper pipe	no	1		
205		Tee, DN 32 x DN 22 x DN 32: copper pipe	no	5		
206		Tee, DN 25 x DN 25 x DN 25: copper pipe	no	2		
207		Tee, DN 25 x DN 22 x DN 25: copper pipe	no	3		
208		Tee, DN 25 x DN 15 x DN 25: copper pipe	no	9		
209		Tee, DN 20 x DN 15 x DN 20: copper pipe	no	7		
210		Tee, DN 15 x DN 15 x DN 15: hdpe pipe	no	1		
		<u>90 Degrees Fittings</u>				
211		DN 65, 90 degree bends	no	6		
212		DN 50, 90 degree bends	no	5		
213		DN 40, 90 degree bends	no	5		
214		DN 32, 90 degree bends	no	5		
215		DN 25, 90 degree bends	no	12		
216		DN 22, 90 degree bends	no	15		
217		DN 20, 90 degree bends	no	14		
218		DN 15, 90 degree bends	no	16		
		<u>Strainers</u>				
219		Strainer, DN 110	no	1		
		<u>Isolating valves</u>				
220		Isolating valve, DN 50	no	4		
221		Isolating valve, DN 40	no	5		
222		Isolating valve, DN 32	no	10		
223		Isolating valve, DN 25	no	5		
224		Isolating valve, DN 20	no	7		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
225		Reducers Reducer, DN 65 x DN 50	no	1		
226		Reducer, DN 50 x DN 20	no	1		
227		Reducer, DN 50 x DN 32	no	2		
228		Reducer, DN 40 x DN 25	no	1		
229		Reducer, DN 32 x DN 25	no	2		
230		Reducer, DN 25 x DN 22	no	5		
231		Reducer, DN 25 x DN 15	no	5		
232		Reducer, DN 20 x DN 15	no	6		
		<u>Water Reticulation Equipment</u>				
233		500L vertical hot water storage tank with dual coil and back up heating element, tank shall be insulated. Water storage shall include all accessories and fittings as per the specifications and manufacturer's requirements. Concrete slab shall be erected for the hot water storage tank to be installed on, area where tank is installed shall be bunded and waterproofed, with a drainage point in the case of leakage. This shall be read in conjunction with the drawings provided.	no	1		
234		In-line vertical multistage centrifugal pump TPE 32-380/2 A-F-A-BAQE-JDB to be used as hot water circulation for the entire hot water system, as indicated on the drawings provided. Pump setup is to come complete with power wiring from isolator, all necessary accessories and pipe work.	no	1		
235		High-efficiency variable-speed circulation pump (heat pump system) to circulate refrigerate from the heat exchanger to the hot water storage tank, as indicated on the drawings provided. Pump setup is to come complete with power wiring from isolator, all necessary accessories and pipe work.	no	2		
236		Insulation for all hot water pipework, plant, fittings and valves as per specifications.	Sum	1		
237		Pipe hangers and supports	Sum	1		
238		Installation, Testing and Commissioning	Sum	1		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
239		<p>Fire Suppression System <u>Supply, deliver and install the following fire protection system, complete with fire extinguishers, hose reel, and all related signage, brackets, supports and all necessary accessories, as per the manufacturer's recommendations.</u></p> <p>Seal all penetrations around pipes, sleeves, cable, etc. all rooms with firestop mortar, to be approved by Employee Engineer, in accordance with the manufacturers installation guide.</p>	Sum	1		
240		Fire extinguishers (4.5 kg dry chemical powder) and timber backing board, supports and all necessary accessories, as per the, manufacturer's recommendations.	No	10		
241		Fire extinguishers (9 kg dry chemical powder) and timber backing board, supports and all necessary accessories, as per the, manufacturer's recommendations.	No	10		
242		Fire extinguishers (6L wet chemical) and timber backing board, supports and all necessary accessories, as per the, manufacturer's recommendations.	No	1		
243		Fire extinguishers (9L high expansion foam) and timber backing board, supports and all necessary accessories, as per the, manufacturer's recommendations.	No	2		
244		150x150 mm Fire equipment signages and Photoluminescent emergency exit signages as per fire drawings including all necessary fixing accessories.	No.	140		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		Fire Detection System				
253		Supply and Installation of functional fire detection, addressable fire alarm system in entire building. The equipment will be free issued to the contractor.				
		Heavy duty galvanized steel				
253.1		25mm conduit	m	234		
253.2		25mm coupling	no	8		
253.3		25mm 90 degree bends	no	14		
253.4		25mm thread couplings	no	8		
253.5		32mm conduit	m	157		
253.6		32mm coupling	no	6		
253.7		32mm 90 degree bends	no	11		
253.8		32mm thread couplings	no	10		
254		Smoke detectors, xp 95 optical smoke detectors	no.	46		
255		Heat detector, xp 95 multi-sensor optical/heat detector	no.	2		
256		Intelligent manual call point	no.	11		
257		Advanced 1-4 loop addressable fire control panel mx-5404	no.	1		
258		Electronic fire alarm sounder	no.	2		
259		Addressable open-area sounder beacon installed to manufacturer and engineer specifications.	no.	1		
		Testing and commissioning and handover fully a functional fire detection, addressable fire alarm system in entire building. The equipment will be free issued to the contractor	Sum	1		
		Lift installation				
261		Design of fully operated and certified lift complete with all components, with reference to the specification attached to this works information	Sum	1		
262		Supply and deliver Lift complete with all components, with reference to the specification attached to this works information.	Sum	1		
263		Install lift complete with all components, with reference to the specification attached to this works information.	Sum	1		
		Total carried to summary				

21. Mechanical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
264		Test, commission, and handover a fully operated and certified lift complete with all components, with reference to the specification attached to this works information.	Sum	1		
		Total carried to summary				
		page 1 page 2 page 3 page 4 page 5 page 6 page 7 page 8 page 9 page 10 page 11 page 12 page 13 page 14 page 15 page 16 page 17 page 18 page 19 page 20				
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>BILL NO 20</u>				
		<u>ELECTRICAL WORKS</u>				
		<u>LOW VOLTAGE ELECTRICAL</u>				
		<u>RETICULATION</u>				
		<u>LOW VOLTAGE CABLE AND</u>				
		<u>TERMINATION</u>				
1		6mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable.	m	70.00		
2		10mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable.	m	50.00		
3		25mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable.	m	120.00		
4		35mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable.	m	120.00		
6		240mm ² 3 core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable.	m	500.00		
7		10mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable termination kit.	no	4.00		
8		25mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable termination kit.	no	4.00		
9		35mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable termination kit.	no	4.00		
10		50mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable termination kit.	no	4.00		
11		240mm ² 1core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable termination kit.	no	4.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>CABLE SLEEVE</u>				
13		160mm diameter flexible cable sleeve (underground cable installation sleeve)	m	1000.00		
14		110mm diameter flexible cable sleeve (underground cable installation sleeve)	m	1000.00		
		<u>EXCAVATION AND BACKFILLING</u>				
15		Excavation for cable installation (Excavating and backfilling)	m3	500.00		
16		Backfilling using River sand or 3mm screened soil	m3	125.00		
17		Backfilling using 6mm screened soil	m3	200.00		
18		Supply and Installation of Cable Danger Tape	m	625.00		
19		Backfilling using excavated soil from site	m3	200.00		
		<u>TESTING AND COMMISSIONING</u>				
20		Testing and Commissioning of complete installation in accordance to SANS 10142-1 including the issue of COC certificates.	sum	1.00		
		<u>STANDBY PLANT</u>				
		<u>STANDBY DIESEL GENERATOR PLANT</u>				
21		Design, supply and install a 200kVA, 400V diesel standby generator plant for continuous back-up operation, including all the requirements to obtain the warranty and guarantee. The generator shall be supplied and installed with an automatic changeover panel, battery charger and encased in a 3CR12 stainless steel material with sound attenuation. . The generator plant shall be supplied with a 100m 4 core 35mm ² , ECC, SWA LV 600/1000V cable for connecting the main Distribution board (DB-A) incomer and the changeover panel. The generator plant shall be supplied with a 8 x 35mm ² , ECC, SWA LV 600/1000V termination kit for connecting the main provisional facility incomer and the changeover panel.	sum	1.00		
22		Testing and commissioning of the entire installation	sum	1.00		
23		Allow for fuel to fill the tank to full capacity (100%) at the time of issuing the first delivery (handover)	sum	1.00		
24		Training, including four copies of the Maintenance Manual, Documentation and as built drawings	sum	1.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Ground Floor</u> <u>DISTRIBUTION BOARD</u>				
25		Design, Supply and installation of Distribution Board A, comprising of all the switch gear, earth leakage, surge protection, labelling and wiring as per drawing No: PLZENG00051-1-000-E-SL-0001-02 and TPD - 002- DBSPEC	no	1.00		
26		Design, Supply and installation of Distribution Board Comprising of all the switch gear, earth leakage, surge protection, labelling and wiring as per drawing No:PLZENG00051-1-000-E-SL-0001-04 and TPD - 002- DBSPEC	no	1.00		
27		Design, Supply and installation of Lift Distribution Board ,comprising of all the switch gear, earth leakage with overload protection, circuit breakers, labelling and wiring as per TPD - 002- DBSPEC	no	1.00		
		<u>UPS</u>				
28		Supply and Installation of a new modular, online double conversion, 15kVA, 400V UPS.	no	1.00		
		<u>INTERIOR LIGHTING</u>				
29		Supply and Installation of new , 77W surface mounts complete with the stainless steel mounting bracket, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	1.00		
30		Supply and Installation of 1200mm X 600mm, 70W recessed mounted , EMG/15 MIN	no	1.00		
31		Supply and Installation of 600mm X 600mm, 35W recessed mounted	no	23.00		
		Total carried to summary				

22. Electrical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
32		Supply and Installation of 600mm X 600mm, 35W recessed mounted , EMG/15 MIN	no	11.00		
33		Supply and Installation of new (Industrial LED Luminaire) 49W surfaced mounted , EMG/15 MIN, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	2.00		
34		Supply and Installation of new (Industrial LED Luminaire) 49W surfaced mounted , EMG/15 MIN, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	3.00		
35		Supply and Installation of VLN LED 26W surfaced mounted, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	5.00		
36		Supply and Installation of VLN LED 26W surfaced mounted, EMG/15 MIN, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	5.00		
37		Supply and Installation of bulkhead LED 10W, surface mounted the wall, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	17.00		
38		Supply and Installation of bulkhead LED 10W, surface mounted the wall, EMG/15 MIN, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	4.00		
39		Supply and Installation of LED, downlighter 10W recessed mounted.	no	20.00		
40		Supply and Installation of LED, downlighter 10W recessed mounted, EMG/15 MIN	no	9.00		
41		Supply and Installation of coreline SPOT LED, downlighter 11W recessed mounted	no	7.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
42		Supply and Installation of new coreline SPOT LED, downlighter 11W recessed mounted, EMG/15 MIN	no	15.00		
43		Supply and Installation of 16A one-way light switch complete with recess mount box and cover plate	no	11.00		
44		Supply and Installation of one-way, one-lever light switch complete with recess mount box and cover plate, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	4.00		
45		Supply and Installation of 16A one-way, Two-lever light switch complete with recess mount box and cover plate, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	1.00		
46		Supply and Installation of 16A two-way light switch complete with recess mount box and cover plate, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	2.00		
47		Supply and Installation of 16A demountable light switch complete with recess mount box and cover plate, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	1.00		
48		Supply and Installation of 16A three phase industrial four-way light switch complete with recess mount box and cover plate	no	2.00		
49		Supply and Installation of occupancy sensor 360°, 7m range complete with all the accessories	no	19.00		
50		Supply and Installation of outdoor photo cell, as per drawing PLZENG00051-1-000-E-LA-0002-01	no	2.00		
		<u>POWER SUPPLY POINTS</u>				
51		Supply and Installation of 16A 230V Dedicated Single switch socket outlet (Red) mounted in power skirting	no	14.00		
53		Supply and Installation of 16A, single phase, single switched standard socket outlets (grey) mounted in power skirting as per drawing	no	9.00		
		Total carried to summary				

22. Electrical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
53		Supply and Installation of 16A, single phase, weatherproof single standard socket outlet (White), complete with recessed mount box and cover plate	no	3.00		
54		Supply and Installation of 16A, single phase, single standard socket outlet (White), complete with recessed mount box and cover plate. (Installed 300mm above floor level) as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	8.00		
55		Supply and Installation of 16A, single phase, double switched, double standard socket outlet (White), complete with recessed mount box and cover plate. (Installed 1350mm above floor level) as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	7.00		
56		Supply and Installation of cavity floor box with 2 x 2 standard socket outlets, and 2 x ethernet double floor sockets CAT 6 & CAT 5 complete with lid, as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	1.00		
57		Supply and Installation of pull up tower with 2 x standard socket outlet, 1 x RSA Slimline, USB Type - A, Type - C and RJ45 complete with 2.5m power lead, as per drawing No: PLZENG00051-1-000-E-LA-	no	5.00		
58		Supply and Installation of 5A, single phase, standard socket outlet (White), complete with recessed mount box and cover plate. installed in ceiling void as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	13.00		
59		Supply and Installation of 25A single phase isolator (To be installed in ceiling void)	no	1.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
60		Supply and Installation of 20A, single phase cordgrip isolator (Installed 1800mm above floor level), as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	5.00		
61		Supply and Installation of 20A, single phase cordgrip isolator weatherproof (Installed 1800mm above floor level), as per drawing No: PLZENG00051-1-000-E-LA-0003-02	no	1.00		
62		Supply and Installation of 10A, single phase cordgrip isolator (Installed 1800mm above floor level), as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	11.00		
63		Supply and Installation of 10A, single phase cordgrip isolator (To be installed in the ceiling), as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	7.00		
64		Supply and Installation of , three phase Weatherproof isolator (Mounting Position to be determined on site), as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	3.00		
65		Supply and Installation of 32A, three phase isolator for the lift (Mounting Position to be determined on site), as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	1.00		
66		Supply and Installation of 20A, three phase weatherproof isolator (Mounting Position to be determined on site), as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	3.00		
67		Supply and Installation of 10A, three phase isolator (To be installed under roof slab), as per drawing No: PLZENG00051-1-000-E-LA-0003-01	no	4.00		
		<u>LOW VOLTAGE CABLES</u>				
68		6mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable.	m	100.00		
69		6mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable termination kit.	no	4.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
70		10mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable.	m	200.00		
71		50mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable termination kit.	no	4.00		
		<u>WIRING</u>				
72		Low Voltage 4 mm ² stranded house wiring for internal wiring - red	m	600.00		
73		Low Voltage 4 mm ² stranded house wiring for internal wiring - white	m	600.00		
74		Low Voltage 4 mm ² stranded house wiring for internal wiring - blue	m	600.00		
75		Low Voltage 4 mm ² stranded house wiring for internal wiring -black	m	600.00		
76		Low Voltage 6 mm ² stranded house wiring for internal wiring - green	m	1000.00		
77		Low Voltage 6 mm ² stranded house wiring for internal wiring - red	m	1000.00		
78		Low Voltage 6 mm ² stranded house wiring for internal wiring - white	m	1000.00		
79		Low Voltage 6 mm ² stranded house wiring for internal wiring - blue	m	1000.00		
80		Low Voltage 6 mm ² stranded house wiring for internal wiring - black	m	1000.00		
81		Low Voltage 6 mm ² stranded house wiring for internal wiring - green	m	1000.00		
		<u>PVC PRODUCTS, SLEEVES AND CONDUIT ACCESSORIES</u>				
82		20 mm diameter PVC conduit, boxes, couples adapters and accessories	m	1500.00		
83		20 mm diameter PVC conduit chased in wall , boxes, couples adapters and accessories	m	1500.00		
84		25 mm Diameter PVC conduit, boxes, couples adapters and accessories	m	1300.00		
85		25 mm Diameter PVC conduit chased in walls, boxes, couples adapters and accessories	m	1300.00		
86		32 mm Diameter PVC conduit, boxes, couples adapters and accessories	m	1800.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
87		PVC trunking Wiring Consumable accessories including Lugs, Ferrules, Terminal Blocks, Screws, connections, compression glands etc	sum	1.00		
		<u>Power Skirting</u>				
88		Supply and install 3-compartment(70 mm ²) power skirting complete with covers and accessories.(To be mounted along the wall).	m	425.00		
		<u>Cable Ladders and Accessories</u>				
89		Supply and installation of powder coated hot dipped galvanised cable ladder including bends, T-Pieces, hot dipped galvanised threaded rod, fasteners and accessories	m	63.00		
90		Supply and installation of powder coated and painted hot dipped galvanised P9000 trunking including bends, T-Pieces, hot dipped galvanised threaded rod, fasteners and accessories.	m	1005.00		
		<u>EARTHING AND LIGHTNING PROTECTION</u>				
91		Design, Supply and installation of the building earthing and lightning protection including down conductors, conduits for running down conductors, bonding bar, and other accessories.	sum	1.00		
		<u>TESTING AND COMMISSIONING</u>				
92		Testing and Commissioning of complete installation in accordance to SANS 10142-1 including the issue of COC certificates	sum	1.00		
		<u>FIRST FLOOR DISTRIBUTION BOARD</u>				
93		Design, Supply and installation of Distribution Board Comprising of all the switch gear, earth leakage, surge protection, labelling and wiring as per drawing No: PLZENG00051-1-000-E-SL-0004-03-A and TPD - 002- DBSPEC	no	1.00		
		<u>INTERIOR LIGHTING</u>				
94		Supply and Installation of 600mm X 600mm, 35W recessed mounted	no	40.00		
95		Supply and Installation of 600mm X 600mm, 35W recessed mounted , EMG/15 MIN	no	15.00		
		Total carried to summary				

22. Electrical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
96		Supply and Installation of 224 LED, 146W Suspended on ceiling	no	5.00		
97		Supply and Installation of 224 LED, 146W Suspended on ceiling, EMG/15 MIN	no	7.00		
98		Supply and Installation of bulkhead LED 9W, surface mounted the wall, EMG/15 MIN	no	10.00		
99		Supply and Installation of , downlighter 10W recessed mounted.	no	25.00		
100		Supply and Installation of new LED, downlighter 10W recessed mounted, EMG/15 MIN	no	10.00		
101		Supply and Installation of new coreline SPOT LED, downlighter 11W recessed mounted	no	30.00		
102		Supply and Installation of new coreline SPOT LED, downlighter 11W recessed mounted, EMG/15 MIN	no	10.00		
103		Supply and Installation of 16A one-way light switch complete with recess mount box and cover plate	no	5.00		
104		Supply and Installation of 16A two way one- lever light switch complete with recess mount box and cover plate	no	5.00		
105		Supply and Installation of 16A three phase industrial four-way light switch complete with recess mount box and cover plate	no	6.00		
106		Supply and Installation of new dimming switch	no	5.00		
107		Supply and Installation of occupancy sensor 360°, 7m range complete with all the accessories	no	25.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>POWER SUPPLY POINTS</u>				
108		Supply and Installation of 16A 230V Dedicated Single switch socket outlet (Red) mounted in power skirting	no	25.00		
109		Supply and Installation of 16A 230V single switched socket outlets (White) mounted in power skirting	no	10.00		
110		Supply and Installation of 16A 230V single flush switch socket outlet (White), complete with recessed mount box and cover plate. (Installed 300mm above floor level)	no	10.00		
111		Supply and Installation of 16A 230V Single flush switch socket outlet (White), complete with recessed mount box and cover plate. (Installed 1350mm above floor level)	no	3.00		
112		Supply and Installation of 16A 230V Double flush switch socket outlet (White), complete with recessed mount box and cover plate. (Installed 1350mm above floor level)	no	3.00		
113		Supply and Installation of 16A 230V single flush switch socket outlet (White), 2x16A Slimline(164-2) and 1 x RJ45 Modules complete with recessed mount box and cover plate. (Installed in underfloor box with Lid)	no	8.00		
114		Supply and Installation of multiplug pull up tower with 2 x 16A RSA(164-1) 2x16A SLIMLINE (164-2) and 1xRJ45 Module with 3.5m POWER LEAD and 16A Slimline(164-2) Plug Top .	no	5.00		
115		Supply and Installation of Socket outlet with 2 x 16A Slimline (164-2) and 2 x RJ45 Modules (installed 300mm above floor level) .	no	10.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
116		Supply and Installation of 5A 230V single flush switch socket outlet (White), complete with recessed mount box and cover plate. (Installed as per drawing No: PLZENG00051-1-000-E-LA-0003-02-A)	no	7.00		
117		Supply and Installation of 10A 230V single phase cordgrip isolator (Installed 1800mm above floor level)	no	8.00		
118		Supply and Installation of 10A 230V single phase cordgrip isolator (Installed in ceiling void)	no	10.00		
119		Supply and Installation of 20A 230V single phase cordgrip isolator (Installed 1800mm above floor level)	no	6.00		
120		Supply and Installation of 32A 230V single phase cordgrip isolator (Installation position to be determined on site)	no	2.00		
		<u>LOW VOLTAGE CABLES</u>				
121		6mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable.	m	200.00		
122		6mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable termination kit.	no	4.00		
123		10mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable.	m	200.00		
124		10mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable termination cable	no	4.00		
		<u>WIRING</u>				
125		Low Voltage 2.5 mm ² stranded house wiring for internal wiring - red	m	300.00		
126		Low Voltage 2.5 mm ² stranded house wiring for internal wiring - white	m	300.00		
127		Low Voltage 2.5 mm ² stranded house wiring for internal wiring - blue	m	300.00		
128		Low Voltage 2.5 mm ² stranded house wiring for internal wiring -black	m	300.00		
129		Low Voltage 2.5 mm ² stranded house wiring for internal wiring - green	m	300.00		
130		Low Voltage 4 mm ² stranded house wiring for internal wiring - red	m	300.00		
		Total carried to summary				


Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
131		Low Voltage 4 mm2 stranded house wiring for internal wiring - white	m	300.00		
132		Low Voltage 4 mm2 stranded house wiring for internal wiring - blue	m	300.00		
133		Low Voltage 4 mm2 stranded house wiring for internal wiring - black	m	300.00		
134		Low Voltage 4 mm2 stranded house wiring for internal wiring - green	m	300.00		
<u>PVC PRODUCTS, SLEEVES AND CONDUIT ACCESSORIES</u>						
135		20 mm diameter PVC conduit, boxes, couples adapters and accessories	m	750.00		
136		20 mm diameter PVC conduit chased in walls, boxes, couples adapters and accessories	m	750.00		
137		25 mm Diameter PVC conduit, boxes, couples adapters and accessories	m	500.00		
138		25 mm Diameter PVC conduit chased in walls, boxes, couples adapters and accessories	m	500.00		
139		32 mm Diameter PVC conduit, boxes, couples adapters and accessories	m	800.00		
140		32 mm Diameter PVC conduit chased in walls, boxes, couples adapters and accessories	m	800.00		
141		PVC trunking Wiring Consumable accessories including Lugs, Ferrules, Terminal Blocks, Screws, connections, compression glands etc	m	1.00		
<u>POWER SKIRTING</u>						
142		Supply and install 3-compartment(70 mm2) power skirting complete with covers and accessories.(To be mounted along the wall).	m	425.00		
<u>CABLE LADDERS AND ACCESSORIES</u>						
143		Supply and installation of powder coated hot dipped galvanised cable ladder including bends, T-Pieces, hot dipped galvanised threaded rod, fasteners and accessories	m	60.00		
144		Supply and installation of powder coated hot dipped galvanised P9000 trunking including bends, T-Pieces, hot dipped galvanised threaded rod, fasteners and accessories.	m	980.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>EARTHING AND LIGHTNING PROTECTION</u>				
145		Design, Supply and installation of the building earthing and lightning protection including down conductors, conduits for running down conductors, bonding bar, and other accessories.	sum	1.00		
		<u>TESTING AND COMMISSIONING</u>				
146		Testing and Commissioning of complete installation in accordance to SANS 10142-1 including the issue of COC certificates	sum	1.00		
		<u>Parking Junction Box</u>				
147		Design, Supply and installation of a Junction box	no	4.00		
		<u>Exterior LIGHTING</u>				
148		Supply and Installation of VLN LED 26W surfaced mounted	no	7.00		
149		Supply and Installation of new VLN LED 26W surfaced mounted, EMG/15 MIN	no	4.00		
150		Supply and Installation of O-line P1000 Stainless Steel Unistrut	m	65.00		
151		Supply and install national photocell. Photocell shall be installed in a IP65 housing.	no	2.00		
		<u>LOW VOLTAGE CABLES</u>				
152		4mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable.	m	50.00		
153		4mm ² 4core PVC insulated PVC bedded SWA PVC sheathed 600/1000V ECC cable termination kit.	no	4.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>WIRING</u>				
154		Low Voltage 2.5 mm2 stranded house wiring for internal wiring - red	m	50.00		
155		Low Voltage 2.5 mm2 stranded house wiring for internal wiring - white	m	50.00		
156		Low Voltage 2.5 mm2 stranded house wiring for internal wiring - blue	m	50.00		
157		Low Voltage 2.5 mm2 stranded house wiring for internal wiring -black	m	50.00		
158		Low Voltage 2.5 mm2 stranded house wiring for internal wiring - green	m	50.00		
		<u>PVC PRODUCTS, SLEEVES AND CONDUIT ACCESSORIES</u>				
159		32 mm Diameter PVC conduit, boxes, couples adapters and accessories	no	12.00		
160		PVC trunking Wiring Consumable accessories including Lugs, Ferrules, Terminal Blocks, Screws, connections, compression glands etc	sum	1.00		
		<u>EARTHING AND LIGHTNING PROTECTION</u>				
161		Design, Supply and installation of the building earthing and lightning protection including down conductors, conduits for running down conductors, bonding bar, and other accessories.	sum	1.00		
		<u>TESTING AND COMMISSIONING</u>				
166		Testing and Commissioning of complete installation in accordance to SANS 10142-1 including the issue of COC certificates	sum	1.00		
		Total carried to summary				

22. Electrical

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		page 1				
		page 2				
		page 3				
		page 4				
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		page 12				
		page 13				
		page 14				
		page 15				
		Total carried to section summary				

						
	Item No.	Description	Unit	Quantity	Rate	Total
		BILL NO.21				
		CCTV				
1		Supply and Installation Flexidome IP indoor 5000i IR 4MP Dome Camera complete with ceiling-mount/wall-mount bracket and mounting accessories	no.	17.00		
2		Supply and Installation of Outdoor bullet fixed camera 4MP complete with wall-mount bracket	no.	2.00		
3		Supply, deliver, and Installation of Tilt Zoom Camera complete with mounting accessories	no.	4.00		
		Supply, delivery and installation of RJ45 to RJ45 Inline surge arrestor	no.	5.00		
		Software, Licenses, and System Training				
4		Cognify client workstations software Cognify camera licences	sum	23.00		
		Cabling				
5		Supply, deliver, installation, and termination of CAT6 STP ethernet cable (complete with terminations, labelling, and associated accessories)	m	1150.00		
6		25 mm Diameter hot deep steel galvanised bosal conduit, boxes,couples adapters and accessories	sum	1.00		
		Total carried to section summary				



Item no	Description	Unit	Quantity	Rate	Total
BILL NO.22					
ACCESS CONTROL					
1	Supply, delivery, and Installation of Biometric/Card Access Control Reader equal or similar approved to XMP-TMC32xx7.	no.	7.00		
2	Supply, delivery, and Installation of Electromagnetic Door locks (maglock) including bracket	no.	7.00		
3	Supply, delivery, and Installation of Break Glass units green call point resettable	no.	10.00		
4	Supply, delivery, and installation of Key Box Switch	no.	5.00		
5	Supply, delivery, and Installation Switch No Touch Exit Sensor 12VDC	no.	6.00		
6	Supply, delivery, and installation expandable to 8 card readers complete with housing and PSU with back-up battery and housing and accessories.	no.	8.00		
7	Supply, delivery, and installation of Mylar 0.5mm ² Multi Core 8 Pair	m	500.00		
8	Supply, delivery, and installation of CAT6 Network Cable	m	1000.00		
Software, Licenses, and Systems Training					
9	Autec Babylon, XMP-Babylon (XMP-NT) System Package license	sum	1.00		
10	System Base Software package expansions	sum	1.00		
11	Access Control systems and equipment training including Babylon User Training (new users)	sum	1.00		
Total carried to section summary					



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		BILL NO 23				
		ICT Infrastructure				
1		Supply, deliver, installation of Optical Fibre 24 core Single Mode - (Procurement Building to Fire Building) complete with associated accessories for installation and termination	m	200.00		
2		Supply, deliver, installation of 43U 800mm Cabinet (complete with cooling fans, breakers, blank plates, brush panels, mounting accessories, cable management, PDU, and back-up battery system)	no.	1.00		
3		Supply, deliver, and installation of core switch 24 Port PoE 1G + 2x10G Uplink IP Base - (one to be installed at the Procurement Building and one Fire Building)	no.	2.00		
4		Supply, deliver, and installation of 48 Port PoE 2xG Uplink IP Base network switch	no.	2.00		
5		Supply, deliver, and installation of 48 Fibre 2U Patch Panel	no.	2.00		
6		Supply, deliver, and installation of 24 Fibre 2U Patch Panel	no.	2.00		
7		Supply, deliver and installation of LC duplex patch leads Single Mode 1m	no.	8.00		
8		Supply, deliver, and installation of 48 CAT6 Patch panel (complete with RJ45-connectors with surge protection and STP patch leads)	no.	2.00		
9		Supply, deliver and installation of CAT6 RJ45 LAN point outlet to be installed in power skirting	no.	20.00		
10		Supply, deliver and installation of CAT6 RJ45 LAN point outlet to be installed in flush mount 100mm x 50mm box	no.	4.00		
11		Supply, deliver, and installation of CAT 6 RJ45 LAN point outlet flush mount block to be installed in the ceiling for Wi-Fi access point	no.	5.00		
12		Wi-Fi 802.11ac (Wave 2) controller-based access point, indoor type, with 4x4 MIMO, 3 spatial streams, and advanced RF interference management	no.	5.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
13		Supply, deliver, and installation of CAT 6 STP ethernet cable for LAN point outlets and Wi-Fi access points complete with RJ45 terminations	m	1000.00		
14		Labelling of this section of the installation as specified and /or required by any applicable SANS standard(s), including all necessary and correct fixing materials etc. complete	sum	1.00		
15		Complete testing and commissioning of this section of the Network Infrastructure installation as required. Note: Suitably qualified and experienced personnel only to test and commission the relevant equipment / installations	sum	1.00		
		Total carried to summary				

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		Page 1 page 2				
		Total carried to section summary				



Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<p><u>SECTION No. 3 : EXTERNAL WORKS</u></p> <p><u>BILL NO. 1</u></p> <p><u>EXTERNAL WORK</u></p> <p><u>TRADE PREAMBLES</u></p> <p>Trade Preambles:</p> <p>For Trade Preambles refer to 'Model Preambles for Trades' (2008 edition) for the full descriptions of material to be used and work to be done in this Bill.</p> <p>Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent of each item</p> <p><u>Testing of material and filling</u></p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p> <p><u>Precast concrete block road surfacing</u></p> <p>Paving shall be laid in accordance with SABS 1200 MJ, SANS 1058 and the Concrete Masonry Association's specifications</p> <p>Paving shall be laid to herringbone pattern on 20mm thick (thickness after final compaction) clean river sand (preparation of ground or filling elsewhere)</p> <p>Clean sand shall be swept into joints between roadstones at completion</p> <p><u>ROADWORK, PARKING AREAS, PAVING AND RAMPS</u></p> <p><u>Excavation in earth</u></p> <p>Not exceeding 2m deep over site between buildings, retaining walls, etc to reduce levels and dispose in prescribed stock piles on site</p> <p><u>Extra over bulk excavation in earth for excavation in</u></p>				
1		Not exceeding 2m deep over site between buildings, retaining walls, etc to reduce levels and dispose in prescribed stock piles on site	m3	567.50		
2		Soft rock	m3	56.75		
3		Hard rock	m3	28.38		
		Total carried to summary				

26. External Works

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
4		<u>Extra over all excavations for carting away</u> Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	950.00		
5		<u>Keeping excavations free of water</u> Keeping excavations free of water other than subterranean water	Item	1.00		
6		<u>Compaction of surfaces</u> Compaction of ground surfaces under pavings etc, including scarifying for a depth of 80mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	950.00		
		<u>LAYER WORKS</u>				
		<u>Filling supplied by the contractor under parking areas, roadways, etc</u>				
7		G7 material in accordance with SABS 1200 DM, compacted to 93% Mod AASHTO density	m3	142.50		
8		G4 Subbase compacted to 95% MOD AASHTO Density	m3	95.00		
9		G4 Base compacted to 98% MOD AASHTO Density	m3	95.00		
10		20mm River sand bedding	m2	10.00		
		<u>Bituminous premix road surfacing</u>				
11		13.2mm Double seal Thick paving to parking areas, roadways, etc including bitumen spray to base course	m2	950.00		
		<u>60mm Thick 25MPa concrete interlocking block paving of 200 x 100mm grey paving blocks in accordance with SANS 1058, laid to falls on and including 20mm thick sand layer with joints filled in with sand, compacted with a vibration compactor (sand layer elsewhere)</u>				
12		Paving to sidewalks etc to falls, including necessary straight edge blocks	m2	500.00		
		Total carried to summary				

26. External Works

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Precast concrete finished smooth on exposed surfaces, including bedding, jointing and pointing</u>				
13		125 x 230mm High Channel kerbs (SANS 927 fig 3) with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint, including excavation, backfilling, etc	m	25.00		
14		150 x 250mm High Barrier kerbs (SANS 927 fig 3) with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint, including excavation, backfilling, etc	m	35.00		
15		1000 x 230mm High Vehicular scoop, including excavation, backfilling, etc	m	30.00		
16		1000 x 230mm High transition kerb, including excavation, backfilling, etc	m	4.00		
17		1000 x 230mm High Pedestrian scoop, including excavation, backfilling, etc	m	10.00		
18		1000 x 230mm High Barrier to mountable, including excavation, backfilling, etc	m	10.00		
		<u>Road signs</u>				
19		Standard "STOP" sign with 50mm diameter galvanised mild steel post bedded in and including unreinforced concrete base, including any necessary excavation, paint finish, etc	No	1.00		
		<u>Paintwork</u>				
		<u>Prepare and apply two coats white reflective road marking paint on tarmacadam</u>				
20		100mm wide line at parking bay (RM6)	m	72.00		
21		100mm wide pedestrian crossing line (RTM3)	m	20.00		
22		300mm wide yield line (RTM2)	m	10.00		
23		Disabled Persons Symbol 750 x 1000mm overall (RM17.3)	No	1.00		
24		Pedestrian Crossing 2400 x 10000mm overall (RTM4)	No	1.00		
25		Yield control ahead symbol 450 x 1250mm overall (WM5)	No	1.00		
		<u>Ditto, but 150mm white and 200mm yellow, as per drawing detail</u>				
26		Painted Island 1200 x 5000mm overall (RM5)	No	1.00		
		Total carried to summary				

26. External Works

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>CONCRETE STORMWATER CHANNELS ETC</u>				
27		Excavation in earth for SWC trenches	m3	3.60		
28		Unreinforced concrete bedding under precast concrete blocks	m3	1.38		
		<u>Concrete stormwater channels</u>				
29		410 x 180mm Channel 1000mm long with segmental channel with one open end and one stopped end formed therein and finished smooth, including placing in position under shoe of rainwater pipe on a well rammed earth bottom	No	40.00		
		<u>MESH FENCING</u>				
		Note:				
		In high corrosion areas fence posts, stays, gates, etc are to be galvanised				
		<u>Fencing</u>				
		<u>Excavations other than bulk</u>				
		<u>Excavation in earth not exceeding 2m deep:</u>				
30		Trenches.	m3	4.36		
31		Holes.	m3	3.35		
		<u>Extra over excavations other than bulk in earth for excavation in:</u>				
32		Soft rock.	m3	0.77		
33		Hard rock.	m3	0.39		
34		Compaction of excavated surfaces, adding suitable material where necessary and compact to 93% Mod AASHTO density	m2	950.00		
		<u>Extra over all excavations for loading, carting away and dumping</u>				
35		Surplus excavated material (no allowance made for increase in bulk) off site to a dumping site located by the contractor.	m3	7.71		
		<u>Risk of collapse of excavations</u>				
36		To sides of trenches and holes not exceeding 1.5m deep	m2	81.74		
		<u>Keeping excavations free from water</u>				
37		Keeping excavations free from water	Item	1.00		
		Total carried to summary				

26. External Works

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
38		<u>Unreinforced concrete cast against excavated surfaces</u> 15Mpa/19mm stone Concrete	m3	7.71		
39		<u>Finishing all exposed edges and corners of concrete:</u> 20mm chamfers, sloping and splayed, etc. Hot dipped galvanized palisade fencing:	m	10.90		
		<u>FENCING, GATES, ETC (PROVISIONAL)</u>				
40		Supply and deliver high-density and anti-cut pressed mesh fence panels as per specification (similar to free issue material). (300 x 3.05m wide)	m	200.00		
		Supply and deliver compatible fencing posts as per specification.	No	66.67		
		Install new 2400mm high pressed mesh fence, posts, anti-climbing measure (sharktooth bars), including provision of required fixtures.	m	200.00		
		<u>BOUNDRY WALL</u>				
		<u>Excavations</u>				
		<u>excavations in earth not exceeding 2m deep</u>				
41		Trenches.	m3	17.06		
		<u>Extra over excavations other than bulk in earth for excavation in:</u>				
42		Soft rock.	m3	1.71		
43		Hard rock.	m3	0.85		
44		Compaction of ground level to a depth of 150mm, adding suitable material where necessary and compact to 93% Mod AASHTO density	m2	24.72		
		<u>Extra over all excavations for loading, carting away and dumping</u>				
45		Surplus excavated material (no allowance made for increase in bulk) off site to a dumping site located by the contractor.	m3	17.06		
		<u>Risk of collapse of excavations</u>				
46		To sides of trenches and holes not exceeding 1.5m deep	m2	56.85		
		Total carried to summary				

26. External Works

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
47		<u>Keeping excavations free from water</u> Keeping excavations free from water	Item	1.00		
		<u>FILLING ETC</u>				
48		<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density</u> Backfilling to tranches, holes, etc	m3	10.75		
		<u>SOIL POISONING</u>				
49		<u>Soil insecticide to be executed with SABS compliance by a firm of specialists under a 5 year guarantee</u> To bottoms and sides of tranches	m2	81.57		
		<u>Weedkiller mixed in accordance to supplier's specifications</u>				
50		To bottoms and sides of tranches	m2	81.57		
		<u>CONCRETE, FORMWORK & REINFORCEMENT</u>				
		<u>Unreinforced concrete cast against excavated surfaces</u>				
		<u>15Mpa/19mm stone Concrete</u>				
51		Surface blinding under footings	m3	1.24		
		<u>Reinforced concrete cast against excavated surfaces</u>				
		<u>25Mpa/19mm stone Concrete</u>				
52		Strip footings	m3	6.30		
		<u>Reinforcement</u>				
		<u>Mild steel reinforcement to structural concrete work</u>				
53		10mm Diameter bars	t	0.49		
		<u>MASONRY</u>				
		<u>Masonry</u>				
		<u>Brickwork of FBS bricks in class II mortar</u>				
54		Piers	m3	4.86		
		Total carried to summary				

26. External Works

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>Ditto, but FBA bricks in class II mortar</u>				
55		Piers in foundations	m3	0.88		
56		One brick walls	m2	98.88		
57		One brick wall in foundations	m2	32.34		
		<u>Brickwork sundries</u>				
		<u>Brickwork reinforcement</u>				
58		150mm wide reinforcement built in horizontally	m	411.98		
59		150mm wide reinforcement built in horizontally (in foundations)	m	41.20		
		<u>Movement Joints, etc</u>				
		<u>Expansion joints with bitumen impregnated soft board between vertical brickwork surfaces</u>				
60						
61		10mm joints exceeding 300mm high	m	9.60		
62		10mm joints exceeding 300mm high in foundations	m	1.74		
		<u>Face brickwork</u>				
		<u>Face bricks pointed with recessed and vertical joints</u>				
63		Extra over brickwork for face brickwork	m2	98.88		
		<u>Brick on edge header course coping, sills, etc of face bricks</u>				
64		Extra over brickwork for horizontal corbelled band one (1) course high, 85mm protection on band, corbelling on one (1) side pointing on face and soffits	m	41.20		
		Total carried to summary				

26. External Works

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>METALWORK</u>				
		<u>Sundry steelwork</u>				
		<u>Welded screens, gates, etc to brickwork:</u>				
65		Single vehicular gate 4360 x 2000mm high, with 1600 x 2000mm double swing gate opening, of 150 x 150 x 4mm hollow section frame with 50 x 75 x 4mm bottom rail section, filled in with 50 x 50 x 5mm inverted angle bars at 150mm centres, with 100 x 100 x 4mm hollow section posts in-between, together with 50 x 10mm flat bar screens/leaf, and fitted with three heavy duty bullet type hinges to gate welded to post and with barrel bolt welded on to gate frame as per architect drawings	No	1.00		
66		Double pedestrian gate 1770 x 2055mm high, with 885 x 2005mm double swing gate opening, of 50 x 50 x 4mm hollow section frame with 50 x 75 x 4mm bottom rail section, filled in with 50 x 50 x 5mm inverted angle bars at 150mm centres, together with 50 x 10mm flat bar screens/leaf, and fitted with three heavy duty bullet type hinges to gate welded to post and with barrel bolt welded on to gate frame as per architect drawings	No	1.00		
67		Single garden screen 2300 x 1750mm high, with 1125 x 1725mm double swing gate opening, of 50 x 50 x 4mm hollow section frame with 50 x 75 x 4mm bottom rail section, filled in with 50 x 50 x 5mm inverted angle bars at 150mm centres, together with 50 x 10mm flat bar screens/leaf, and fitted with three heavy duty bullet type hinges to gate welded to post and with barrel bolt welded on to gate frame, to align with balustrade as per architect drawings	No	1.00		
		Total carried to summary				

26. External Works

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>BOLLARDS</u>				
		<u>Precast concrete bollards</u>				
		<u>excavations in earth not exceeding 2m deep</u>				
68		Holes.	m3	2.72		
		<u>Extra over excavations other than bulk in earth for excavation in:</u>				
69		Soft rock.	m3	0.27		
70		Hard rock.	m3	0.14		
71		Compaction of ground level to a depth of 150mm, adding suitable material where necessary and compact to 93% Mod AASHTO density	m2	5.45		
		<u>Extra over all excavations for loading, carting away and dumping</u>				
72		Surplus excavated material (no allowance made for increase in bulk) off site to a dumping site located by the contractor.	m3	2.72		
		<u>Unreinforced concrete cast against excavated surfaces</u>				
		<u>25Mpa/19mm stone Concrete</u>				
73		Holes.	m3	2.72		
		<u>Risk of collapse of excavations</u>				
74		To sides of trenches and holes not exceeding 1.5m deep	m2	19.80		
		<u>Keeping excavations free from water</u>				
75		Keeping excavations free from water	Item	1.00		
		<u>Smooth grey standard precast concrete bollards</u>				
76		250mm diameter bollard, 1200mm high planted to concrete	No	18.00		
		Total carried to summary				

26. External Works

Item no.	Payment clause	DESCRIPTION	Unit	Qty	Rate	Amount
		Page 1				
		page 2				
		page 3				
		page 4				
		page 5				
		page 6				
		page 7				
		page 8				
		page 9				
		page 10				
		Total carried to section summary				



	Item No.	Description	Unit	Quantity	Rate	Total
		<p>Section 4</p> <p>BILL NO.1</p> <p><u>PROVISIONAL SUMS</u></p> <p>Work for which budgetary allowances are provided will be measured and valued in accordance with the relevant building contract and deducted in whole or in part if not required without any compensation for loss of profit on the said allowances</p> <p><u>Where stated, the contractor may allow for profit if required</u></p> <p>Furniture</p> <p>Provide the provisional sum of R1 600 000.00(One million six hundred thousand) for the supply, delivery and installatoin of furniture.</p> <p>Profit</p> <p>Attendance</p> <p>SIGNAGE AND NOTICE BOARDS</p> <p>Provide the amount of R 50 000.00 (Fifty Thousand Rands) for external Signage and Notice Boards</p> <p>Profit</p> <p>Attendance</p> <p>Provide the amount of R 50 000.00 (Fifty Thousand Rands) for internal Signage and Notice Boards</p> <p>Profit</p> <p>Attendance</p>				
			item	1.00		R 1,600,000.00
			item			
			item			
			item	1.00		R 50,000.00
			item			
			item	1.00		R 50,000.00
			item			
			item			
		Total carried to section summary				